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Forest Service

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Environmental Assessment

Anchustegui Sheep & Goat Allotment Complex Livestock Grazing Management Project

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Camas County, Idaho

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SUMMARY

The Sawtooth National Forest proposes to authorize sheep grazing through a ten year term grazing permit on the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek Sheep and Goat (S&G) Allotments. These allotments are collectively referred to as the Anchusteugi Allotment Complex. The project area is located between 15 and 35 miles north of the town of Fairfield, Idaho and is within the Fairfield Ranger District, Sawtooth National Forest, Idaho. These six allotments are comprised of nearly 69,000 acres of land within the boundary of the Sawtooth National Forest. There are about 4,500 acres of private property in-holdings included as part of this total acreage. This private property is unfenced mining land located in upper Elk and Vienna Creek drainages within the Elk Creek and Johnson Creek Allotments.

In summary, the proposed federal action is to authorize continued livestock grazing under a management program designed to continue to meet or move towards desired resource conditions in the project area. The purpose and need for the proposed federal action is to contribute value to grazing permittees in a way that sustains the health of the land and meets Forest Plan direction.

The proposed action continues to allow forage utilization at the same level allowed under the Forest Plan. Maximum forage utilization of grazed areas within each allotment will be limited to the established standard of once-over grazing, approximating 20 percent use of current year's growth. This proposal also includes continued monitoring of the allotments with emphasis on checking for compliance via on-the-ground inspections. These inspections will determine permittee compliance with Annual Operating Instructions (AOI), permit terms and conditions, and standards and guidelines of the Forest Plan.

In addition to the proposed action, the Forest Service also evaluated a no action alternative:

- No Action – No Grazing Alternative. "No action" is synonymous with "no grazing" and means that livestock grazing would not be authorized within the project area. Grazing would be eliminated on the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek Allotments and livestock grazing permits would be cancelled.

Based on the environmental analysis and disclosure documented in the Environmental Assessment (EA), The Fairfield District Ranger, Mike Dettori (Deciding Official) will decide:

1. whether or not to select the proposed action as proposed or modified,
2. what monitoring actions may be required

An updated Allotment Management Plan (AMP) will be completed concurrently with the Deciding Official's decision. The AMP will contain details about management direction and monitoring which will be followed to implement the decision.

CHAPTER ONE

Background

The Anchustegui Allotment Complex is located 15 to 35 miles north of Fairfield, Idaho within the Sawtooth National Forest (See vicinity and allotment maps).

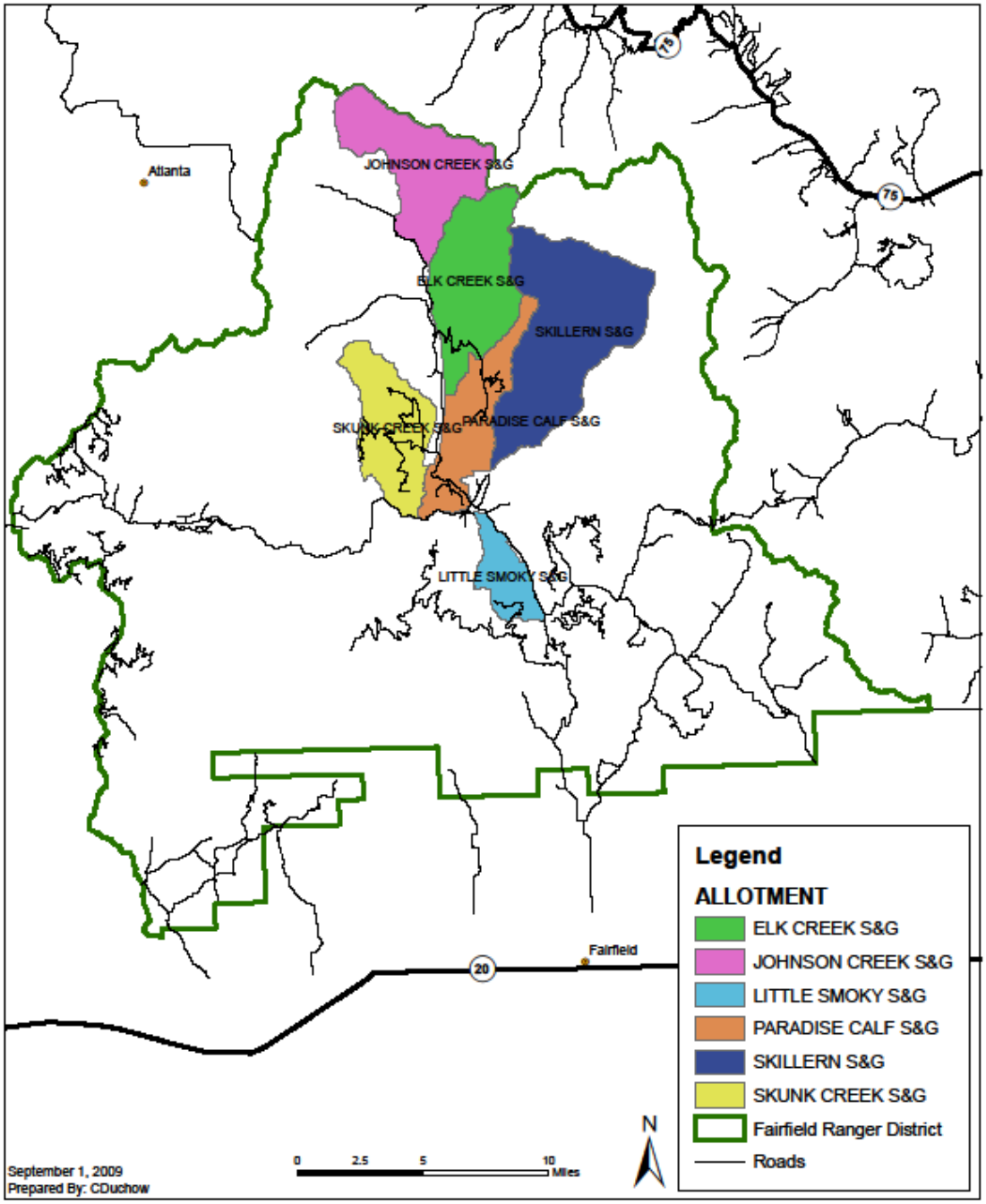

Figure 1: Anchustegui S&G Grazing Allotment Complex Vicinity Map

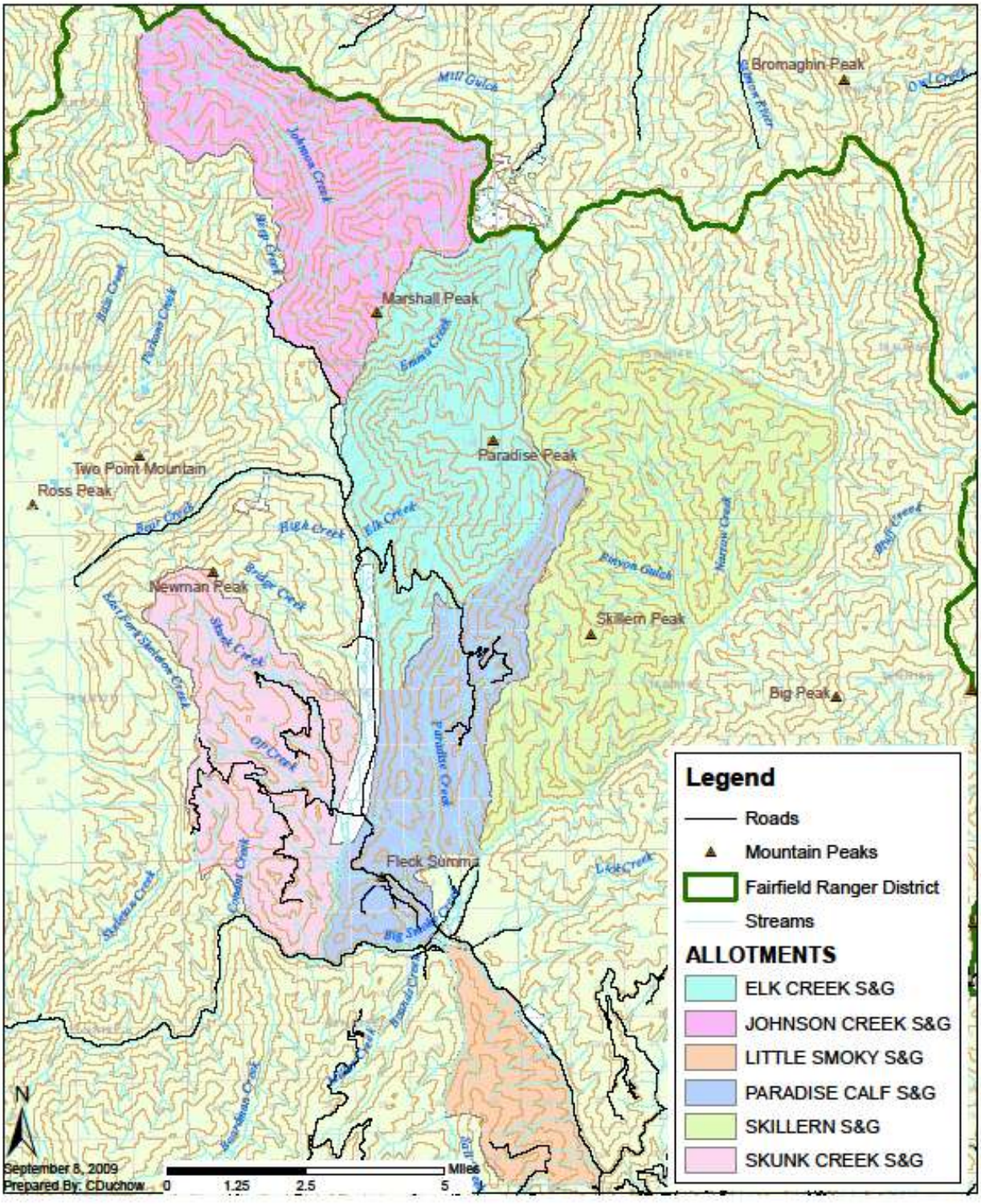

Figure 2: Anchustegui S&G Grazing Allotment Complex Allotment Map

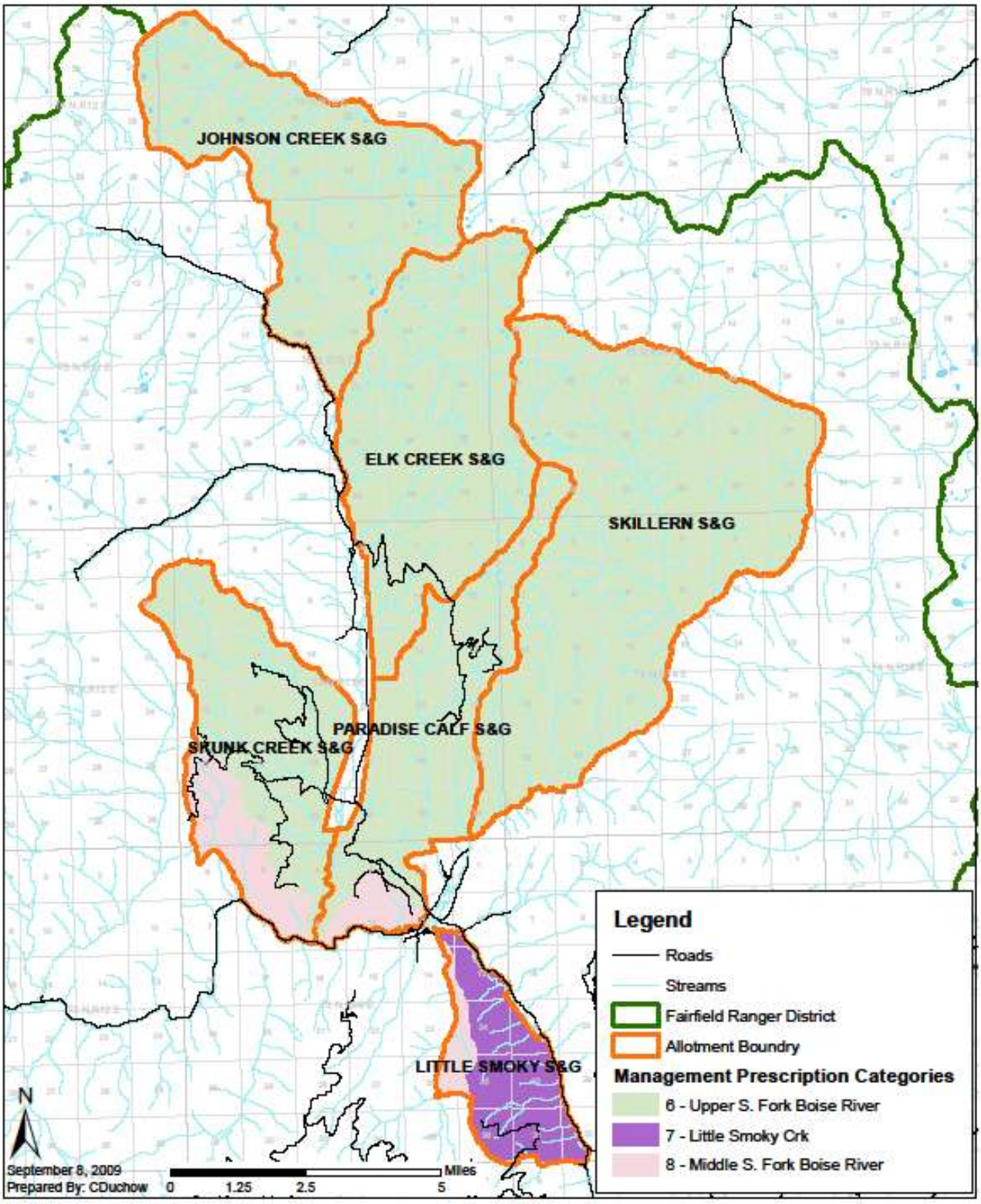

Figure 3: Anchustegui S&G Grazing Allotment Complex Management Prescription Category

The Fairfield Ranger District administers a Term Grazing Permit for a total of 900 ewes with lambs from June 10th through September 8th annually. Trailing across neighboring cattle allotments to exit the Fairfield Ranger District is authorized within the permit. Table 1-1 below provides permit and allotment statistics. Stocking rate for the entire allotment complex is 2,693 head months (HMs).

Table 1: Anchustegui Allotment Complex Permit Statistics

Allotment	Grazing Season	Sheep Grazed	Total Acres
Skillern	06/10 – 09/08	900 Ewe/Lambs	21051
Little Smoky	06/10 – 09/08	900 Ewe/Lambs	4100
Paradise/Calf	06/10 – 09/08	900 Ewe/Lambs	8961
Johnson Creek	06/10 – 09/08	900 Ewe/Lambs	12390
Elk Creek	06/10 – 09/08	900 Ewe/Lambs	12785
Skunk Creek	06/10 – 09/08	900 Ewe/Lambs	9679
Totals	**06/10 – 09/08**	**900 Ewe/Lambs**	**68966**

The first recorded grazing within the project area occurred in the late nineteenth century, but little information on the stocking rate was recorded until 1935. In 1935, permitted numbers and the season length calculate to 30,284 head months. These head months have been reduced several times since 1935 to reach the current stocking rate of 2,693 head months, a 91% reduction.

The AMP currently in effect for these allotments was developed in 1980. While current management direction has already been incorporated into the permit and the AOI, it is not documented in the current AMP. An updated AMP is needed to provide consistency between short and long-term management direction.

In 1970 three separate sheep bands (3,380 ewes with lambs) were permitted for the June 10th through October 5th season of use (13,113 Head Months). Since 1993 when Anchustegui acquired the Term Grazing Permit, sheep grazing within the project area has been reduced about 80%. The permittee is currently permitted to graze 900 ewes with lambs from June 10th through September 8th (2,693 HMs).

Table 2: Anchustegui Allotment Complex Grazing History

Years	Permitted Numbers	Season of Use	Head Months
Pre-1988[a]	3,380 sheep	6/10 – 10/20	14,779 = 100%
1988[b]	1,800 sheep	6/10 – 8/09	3,610 = 24%
1997[c]	1,350 sheep	6/10 – 8/09	2,707 = 18%
Post-2001[d]	900 sheep	6/10 – 9/08	2,693 = 18%

a Slimam Sheep Co. transferred 7 allotments in 1988 to Anchustegui Sheep Co., but the SNRA Alturas Allotment was forfeited due to trailing limitations. The pre-1988 permit was for 3 bands.

b The Forest Service limited the number to 1800 ewes (two 900 head bands) and shortened the season to end on Aug.9th. This is a result of a mutual FS/permittee agreement to adjust the permit.
c The Forest Service reduced the permitted number by 25% administratively for not following the AOI. The new permit authorized a choice of 1 or 2 bands, not to exceed permitted head months.
d At renewal time the permittee requested to change the permitted number to 900 head and to lengthen the season to 3 months. There was an insignificant change in the number of head months.

Current and prospective permittees desire to continue grazing on these lands. The 2003 Sawtooth Forest Plan addresses livestock grazing. On p. II-19, it states that [livestock] capability determinations serve to "determine a Forest's estimated acreage capable of producing forage." Rangeland capability is not a decision to graze. It is determined at the Forest Plan level. The Forest Plan capability model was used to estimate the amount of Forest rangelands that would be capable of supporting livestock grazing under typical management scenarios and conservative grazing management practices. For the Anchustegui Allotment Complex, the Forest level modeling reflects that the allotment does have rangelands capable of producing forage for domestic livestock grazing. This analysis validates capability at the allotment level.

When continued use is consistent with the goals, objectives, standards, and guidelines of the Forest Plan, it is Forest Service policy to make forage available to qualified livestock operators from lands suitable for grazing (Forest Service Manual (FSM) 2203.1.6).

The Fairfield Ranger District of the Sawtooth National Forest proposes to reauthorize continued livestock grazing in the project area using the existing terms and conditions included in grazing permits issued in the project area.

Purpose and Need for Action

National Forest System lands provide an important source of their livestock forage during parts of the year. Current and prospective permittees desire to continue grazing and have invested in base properties, livestock handling facilities, and range improvements. Public Law 104-19, Section 504(a) states: Establish and adhere to a schedule for the completion of NEPA, Act of 1969 (42 U.S.C. 4321 et seq.) analysis and decisions on all allotments within the National Forest System unit for which NEPA is needed (PL 104-19 section, General Provision 1995).

- The Forest Plan recognizes the continuing need for livestock forage production and has determined that the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek allotments are capable and suitable to support grazing by domestic livestock.

- Livestock management direction needs to be evaluated and if necessary updated to ensure that it is consistent with current Forest Plan management direction and objectives.

- This action is intended to respond to the Sawtooth Forest Plan Goal (p. III-44).
  RAGO01 - Provide for livestock forage within existing open allotments, in a manner that is consistent with other resource management direction and uses.

- This action is intended to respond to the Sawtooth Forest Plan Goal (p. III-78)
  SEGO03 - Develop sustainable land uses and management strategies that contribute to economic development goals.

- This action is intended to meet the Sawtooth Forest Plan Objective (p. III-78)
  SEOB01 - Provide a predictable supply of Forest goods and services within sustainable limits of the ecosystem that help meet public demand.

Proposed Action

Elements of the Proposed Action, developed in response to the statement of purpose and need presented above are as follows.

- Authorize continued grazing on the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek allotments, incorporating Forest Plan guidance, and allowing for permitted livestock grazing that continues meeting or moving towards desired resource conditions.

- Continue an adaptive management strategy for livestock grazing, consistent with the adaptive approach adopted in the Forest Plan.

A more detailed description of the proposed action is found in the Alternatives section in Chapter Two.

Decision Framework

Given the purpose and need, the deciding official reviews the proposed action and the other alternatives in order to make the following decisions:

1. whether or not to select the proposed action as proposed or modified,
2. what monitoring actions may be required.

The Fairfield District Ranger, Mike Dettori is the Responsible Official for this decision.

Public Involvement

The proposal was listed in the Sawtooth Forest Schedule of Proposed Actions (SOPA) starting in the first quarter of 2007. The proposal was provided to the public and other agencies for comment during scoping March 28, 2007 and during the formal 30-day notice and comment period on the Proposed Action July 2, 2009.

Scoping resulted in two responses that related to concerns about and effects on dispersed camping, trails, vegetation, soil, water quality, wildlife habitat and how resources should be

analyzed. Comments were submitted by Jeff Cook of Idaho State Parks & Recreation and by Katie Fite for Western Watersheds Project. The ID team considered these comments in their analysis. Comments related to resource concerns were analyzed in Specialist's Reports and other reports included in the project file. The interdisciplinary team found continued grazing to be consistent with meeting or moving toward resource objectives. The interdisciplinary team developed a list of key issues to address.

Tribal Involvement

Tribal governments have a special and unique legal and political relationship with the United States government as reflected in the United States Constitution, treaties, statutes, court decisions, executive orders, and memoranda. This relationship imparts a duty on all federal agencies to consult, coordinate, and communicate with American Indian Tribes on a government-to-government basis. Because Indian Tribes can be affected by the policies and actions of the Forest Service in managing the lands and resources under its jurisdiction, the Forest Service has a duty to consult with them on matters affecting their interests. Because of this government-to-government relationship, efforts were made to involve local tribal governments and to solicit their input regarding the proposed action. Letters were mailed to the Shoshone-Paiute Tribes of Duck Valley, the Shoshone-Bannock Tribes of Fort Hall, and the Nez Perce Tribe based in Lapwai, Idaho on March 8, 2007.

This project was included in the Sawtooth NF Schedule of Proposed Actions and each of the above Tribes was included on the mailing list for this Schedule. Forest employees met with staff from the Fort Hall Shoshone Bannock Tribe on March 19, 2007. No concerns or issues related to this project were raised by any of the Tribes (Project Record).

Key Issues

Based on comments received on the project, the Forest Service separated the issues into two groups: key issues and issues not analyzed in detail. Key issues were defined as those directly or indirectly caused by implementing the proposed action. Issues not analyzed in detail were identified as those: 1) outside the scope of the proposed action; 2) already decided by law, regulation, Forest Plan, or other higher level decision; 3) irrelevant to the decision to be made; or 4) conjectural and not supported by scientific or factual evidence. The Council on Environmental Quality (CEQ) NEPA regulations require this delineation in Sec. 1501.7, "…identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3)…"

As for key issues, the Forest Service identified three topics raised during scoping. These issues include:

Issue 1 – Vegetation

Current livestock use may be affecting health, vigor, and diversity of vegetation, most notably riparian vegetation, (including springs and seeps), as well as upland vegetation and aspen

regeneration. Livestock grazing may also increase the potential for invasive plant species (noxious weeds and cheatgrass).

Vegetation – Riparian
Livestock grazing may have affected streamside habitat, springs, seeps, and wet meadow areas within the Anchustegui Allotment Complex. Sheep use these wet areas on occasion, and this use can cause disproportionate impacts (compared to upland areas) because the wet soil is more prone to disturbance.

Vegetation – Upland
Livestock grazing may be affecting upland (sagebrush/grass) vegetation particularly along well travelled ridges and bedding areas.

Vegetation – Aspen
Livestock grazing may be affecting regeneration of aspen stands.

Vegetation – Invasive Species
Livestock grazing may have increased the potential for invasive species to occur in the allotments. Increases in cheatgrass and noxious weeds may result from disturbance created by livestock grazing.

Issue 2- Wildlife Habitat

Livestock grazing may be affecting big game habitat, Sawtooth National Forest terrestrial Management Indicator Species (MIS) habitat, and federally listed terrestrial Threatened, Endangered, and Region 4 Forest Service Sensitive (TES) species habitat.

Issue 3- Fish and Aquatic Habitat

Livestock grazing may be affecting fisheries and aquatic habitat, including the threatened bull trout. Aquatic organisms have substantial potential to be affected by grazing at specific sites, because sheep bands numbering hundreds of animals cross and obtain water from streams while being herded across allotments.

Issues Not Analyzed in Detail

A complete list of issues not analyzed in detail and reasons regarding their categorization may be found in the project record. A brief list of those resource concerns that were identified and their disposition follows:

Soils & Water Quality

While livestock grazing may be contributing to some increased soil disturbance potentially affecting water quality and riparian vegetation, this issue is covered under Vegetation-Riparian and Fish and Aquatics Habitat. A soils report located in the project record further identifies how the proposed action meets Forest Plan compliance for soils and erosion.

Threatened, Endangered, Proposed, Candidate, and Sensitive (TEPCS) Plant Species

The project area contains potential habitat for a number of Sawtooth National Forest sensitive, threatened, proposed, and candidate plant species. The Biological Assessment and Evaluation (BA-BE) for the proposed action analyzed the effects of livestock grazing on these species and determined that while potential habitat for a few of these plants exists in the analysis area, no occupied habitat is known.

Cultural Resources

The project area contains cultural resources in the project area. These resources include known and unknown historic, architectural, and archeological sites, as well as traditional lifeway values and places of traditional cultural use. For the project area, field survey and site monitoring found that there are currently no known sites being affected by grazing activities. No new facilities are being proposed as part of either alternative. If at some time in the future it is determined that new facilities are needed, Section 106 compliance will be conducted prior to any ground-disturbing activities such as construction of new facilities (such as fences, troughs, or corrals) and maintenance or removal of existing facilities. If cultural resources are located during the Section 106 field review, avoidance and or mitigation of potential impacts would be developed in consultation with appropriate Tribes and the Idaho State Historic Preservation Office.

Dispersed Recreation and Trails

The project area contains numerous dispersed or undeveloped recreation sites. These sites are traditional areas where people like to picnic or camp. These sites do not have facilities, such as potable water, cooking grills, or restrooms. Most of these sites are within the South Fork of the Boise River corridor. Designated trails also occur in the project area and may have sheep use. There have been minimal reported conflicts between recreationists and livestock to date. Should conflicts start to increase, adaptive management would adjust grazing management to reduce recreation conflicts. Specific required changes would be identified and adapted to address specific concerns as they arose.

Predator Control

While the effects of predator control related to livestock grazing are discussed in the EA in the wildlife section, whether or not predator control should occur, is outside of the scope of this analysis. Predator control activities are planned and performed by the USDA Animal and Plant Health Inspection Service (APHIS). APHIS analyzed the impacts associated with predator damage management for southern Idaho in an Environmental Assessment prepared in 2002 and an April 16, 2002 Decision was issued. A Finding of No significant Impact (FONSI) was re-issued on May 18, 2007, after a 5-year review of the predator management program. It was determined that a new EA was not needed. That analysis is incorporated by this reference.

Climate Change

The Resources Planning Act April 2007 update (Interim Update of the 2000 Renewable Resources Planning Act Assessment, Publication #FS-874) acknowledges and addresses climate change. It also indicates that climate variability makes predictions about drought, rainfall, and temperature extremes highly uncertain. Based on the best available science, it would be too remote and speculative to factor any specific ecological trends or substantial changes in climate into the analysis of environmental impacts of this project. Research about long-range shifts in species range, etc. is ongoing, and a number of groups are discussing the implications of climate change on forest and range management. Although there is a consensus that global warming is occurring, there is still much uncertainty about subsequent ecological interactions and trends at the local or site-specific scale. Given the stochastic nature of climate-related events such as droughts, wildfire, and floods, it would be highly remote and speculative to make management decisions based on such predictions. The best available science concerning climate change is not yet adequate to support reliable predictions about ecological interactions and trends at the local (site-specific) scale. See "Climate Change and Site-specific Range Allotment Analysis White Paper - August 20, 2008" which is made part of this project record.

Idaho Roadless Areas

Seventy four percent (or 51,074 acres) of the Anchustegui Allotment Complex is within area designated as Idaho Roadless Areas (IRAs). The entire Johnson Creek and Skillern Creek Allotments are within IRAs. None of the Little Smoky Allotment is considered within an IRA, while portions of the Skunk, Elk Creek, and Paradise/Calf Allotments are mapped within IRAs. As outlined in the Idaho Roadless Rule Briefing Paper and IRA Checklist for the Anchustegui Allotment Complex (dated July 20, 2009, see project record), the proposed action would have no impact on the status of any roadless area.

Relationship to the 2003 Sawtooth Forest Land & Resource Management Plan (Forest Plan)

Projects conducted within National Forest System lands are guided by a Forest Plan for the specific National Forest. A Forest Plan embodies the provisions of the National Forest Management Act (NFMA), its implementing regulations, and other guiding documents. The 2003 Sawtooth Plan sets forth the direction for managing the land and resources of the Forest (USDA Forest Service 2003). The Forest Plan sets goals, desired conditions, and standards relative to livestock grazing and the rangeland resources.

National Forest planning takes place at several levels: National, regional, forest, and district or project level. This is a project-level analysis. Its scope is confined to addressing the key issues and possible environmental consequences of the project or activity. It does not attempt to re-address decisions made at higher levels. It does, however, implement direction or decisions made at higher levels.

The Sawtooth Forest Plan and its Record of Decision provide direction for this analysis. All proposed actions must be in compliance with management direction in the Forest Plan including standards and guidelines, or a Forest Plan amendment must be proposed.

Besides Forest-wide direction, more specific management is identified as Forest Plan Management Area (MA) direction. Each MA provides for a unique combination of activities, practices, and uses. The project area is within the Upper South Fork Boise River (MA 6), Little Smoky (MA 7), and Middle South Fork Boise River Management Areas, MA 8 (Forest Plan, p. III-175 to III-207).

A Forest Plan compliance checklist was completed for the Proposed Action. Based on this analysis, the Proposed Action is in compliance with Sawtooth Forest Plan direction.

The proposed action would help move the project area towards the following Forest Plan desired conditions:

- Maintain rangelands that are currently meeting desired conditions.
- Improve rangelands that are in less than the desired condition.
- Strengthen the noxious weed control effort.
- Provide sustainable yield of forage for livestock production.

Rangeland Suitability and Capability

As part of the process of evaluating the Purpose and Need for this project, rangeland capability at the Forest and project level was reviewed. The Forest level review looked at information in the Forest Plan, the Final Environmental Impact Statement (FEIS) for the Forest Plan, and the Analysis of the Management Situation. The Forest level review also involved modeling rangeland capability using current information and definitions[1]. The Forest level modeling reflects that all of the allotments in the project area have rangelands capable of producing forage for domestic grazing.

The project level review evaluated rangeland capability and suitability for the project area on a more site-specific basis. The project level review validated the Forest level programmatic determination that all allotments in the project area contain rangelands capable of providing forage for domestic grazing[1] and management indicator species[2].

[1] For additional detail on the Forest level capability review, refer to the following documents in the project record:
(1) *Summary of Capability/Suitability for Livestock Grazing – Comparison of Forest Plan programmatic direction to the Anchustegui Allotments capability analysis*, and
(2) *Management Indicator Species (MIS) and Range Suitability/Capability MIS Monitoring Report*.

[2] For additional detail on the project level review, refer to the *Anchustegui Allotments Rangeland Management Project Management Indicator Species and Rangeland Capability Report* in the project record.

Applicable Regulatory Requirements and Required Coordination

Federal & State Permits Required - No State or Federal (other than Forest Service) permits are required to implement the Proposed Action or any other alternative.

If the decision allows the continuation of livestock grazing, the Forest Service would continue to authorize this use through issuing ten year term grazing permits. Currently, there is a 10-year term grazing permit that authorizes grazing on the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek S&G Allotments. Grazing permits include both "Terms & Conditions" and Forest Plan Standards & Guidelines. (36 CFR 222.3)

Endangered Species Act – This Act (ESA) provides for the protection and conservation of threatened and endangered plant and animal species. A biological assessment/evaluation consistent with the requirements of this act was prepared based on the preferred alternative. Concurrence on the determination of effects for ESA listed species was received from the USDI Fish and Wildlife Service on January 10, 2008 for the Proposed Action for the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek Allotments.

National Historic Preservation Act – This Act provides for the protection of prehistoric and historic resources. Archeological site investigation did not reveal known sites that would be jeopardized by the activity of grazing. If further investigation reveals additional sites and the activity of grazing is suspected to have a detrimental effect, than site protection would be implemented. Concurrence from the Idaho State Historic Preservation Office has been obtained on January 12, 2009 as a "No Adverse Effect to Historic Properties".

Migratory Bird Treaty Act - This Act and subsequent Executive Order and Memorandum of Understanding (MOU) between the USDI Fish &Wildlife Service and USDA Forest Service provide for the protection of migratory birds. Based on the analysis, the Proposed Action is consistent with this Act (see Wildlife Specialist Report, project record).

Environmental Justice - In accordance with Executive Order 12898, all action alternatives were assessed to determine whether they would have disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority or low-income human populations. This assessment considered such programs, policies, and activities. No effects were identified during scoping or the formal 30-day comment period on the Proposed Action.

Idaho Roadless Areas - The project area includes Idaho Roadless Areas (IRAs). There are no new roads or trails proposed, nor are there any improvements to existing roads or trails proposed. Under the Proposed Action, the livestock permittee is required to follow the Sawtooth Forest Travel Plan. Therefore, the Proposed Action and alternatives to the Proposed Action would not affect the status of IRAs. A worksheet documenting the effects to the IRA attributes, as defined by the 2008 Idaho Roadless Rule, is part of the Anchustegui S&G Allotment Complex EA project record.

Research Natural Areas / Recommended Wilderness **-** There are no Research Natural Areas or Recommended Wilderness within the project area.

CHAPTER TWO

This chapter describes and compares the alternatives considered for the Anchustegui Allotment Complex project. It includes a description of each alternative considered. This section also presents the alternatives in comparative form, sharply defining the differences between each alternative and providing a clear basis for choice among options by the decision maker and the public.

Alternatives Including the Proposed Action _____

Alternative 1: No Action – No Grazing Alternative.

"No action" is synonymous with "no grazing" and means that livestock grazing would not be authorized within the project area. (FSH 2209.13 – 92.31) Grazing would be eliminated on the Skillern, Little Smoky, Paradise/Calf, Johnson Creek, Elk Creek, and Skunk Creek S&G Allotments and livestock grazing permits would be cancelled. In accordance with agency regulations (36 CFR 222.4), grazing would cease two years after notice of cancellation. Allotment management would not change during this two-year interval from the current management.

Alternative 2: Current Management - Proposed Action

Alternative 2 is based on the current management actions being implemented, specifically, current management over the last 3 to 5 years. Current management direction is contained in the Forest Plan, term grazing permit, AMP if current, and annual operating instructions (AOI). (FSH 2209.13 – 92.31)

The current Term Grazing Permit (permit) for the six allotments authorizes a maximum of 900 ewes with lambs for a grazing season from June 10th through September 8th. When sheep grazing standards have been met, the permittee is required to remove livestock. Active Forest Service and permittee participation in allotment management is required to ensure the Forest Plan standards and guidelines are not exceeded. Examples of active or adaptive management actions can be, but are not limited to: adjusting the grazing season to accommodate fluctuations in range readiness and to limit grazing in areas influenced by drought or modifying herding practices to achieve better distribution, to meet the physiological requirements of rangeland vegetation, or to avoid terrain considered too fragile to graze because of excessive slopes and loose granitic soils.

Maximum forage utilization of grazed areas within each allotment will be limited to the established standard of once-over grazing, approximating 20 percent use of current year's growth. This proposal also includes continued monitoring of the allotments with emphasis on checking for compliance via on-the-ground inspections. These inspections will determine permittee compliance with AOI, AMP, grazing permit terms and conditions, and standards and guidelines of the Forest Plan.

The permitted stocking (2,693 HMs) is less than the tentative capacity (5,863 HMs) derived by using the Allotment specific capability Analysis or Forest Plan capability model. Existing monitoring indicates the allotments are meeting or moving toward desired conditions as defined in the Forest Plan.

Adaptive Management Practices

Adaptive management is a strategy based on three principles:

(1) Achievement of realistic, clearly defined objectives;
(2) Ongoing monitoring to assess progress toward those objectives; and
(3) Flexibility to alter management when adequate progress is not being achieved.

This management strategy is most appropriate in dynamic situations, where change is the norm. Change can be a characteristic of the management setting, or the result of management activities, or both. In such situations, adaptive management is the most efficient way to achieve desired objectives. The Sawtooth Forest Plan recognizes that most physical, biological, social, and economic systems are dynamic and that management must be correspondingly flexible in order to be effective. The Sawtooth Forest Plan adopts an adaptive management approach (Forest Plan Record of Decision, pp. 6 -7, and Forest Plan, Volume 1, pp. 1-1, 1-3, and 4-5).

The adaptive management procedure is based on both annual grazing use and long-term monitoring to determine if management is achieving long-term management objectives. Establishing a relationship between annual grazing use and achievement of long-term objectives necessarily emphasizes use of end-of-season annual grazing use indicators, as well as long-term indicators of rangeland condition. Within-season annual grazing use indicators may also be established through the adaptive management process to determine when livestock should be moved from a grazing unit to achieve appropriate end-of-season grazing use levels and resource management objectives. Grazing use indicators are discussed in the Monitoring section of the AMPs, found in the Appendices.

Adaptive management actions should be applied where:

- Monitoring shows management objectives have not been achieved or that trend towards achieving desired conditions is not improving or improving at an adequate rate. Monitoring plans are included in the AMP (Appendices).

- Annual indicators of grazing use or grazing standards are not met.

- Climatic events, fire, flood or uses and activities detrimentally impact resource conditions and a modification of grazing use is needed to provide for recovery of the site.

Implementation of adaptive management actions will be consistent with the direction established in the December 19, 2005, Forest Plan Grazing Implementation Guide 1920/2200 Memo to District Rangers signed by the Southwest Idaho Forest Supervisors on Dec. 19, 2005 (USDA Forest Service, 2005). Adaptive actions may be needed and applied in both the short-term and long-term. Adaptive management actions may be implemented singly or as a set of management actions. Short-term actions will be implemented through the AOI. Modifications to the AMP

and/or term grazing permit should be considered where monitoring shows that these actions need to be continued in the long-term or are implemented repeatedly or consistently over time.

For a more detailed discussion of Adaptive Management, please see the paper entitled "Sawtooth Grazing Adaptive Management Practices" (Ririe, 2009) found in the project record.

Rangeland Management Practices

Proven and accepted range management practices such as prescribed grazing, noxious weed treatment, fence and spring development maintenance, and livestock use exclusion are currently being practiced on the Anchustegui Allotment Complex. Implementation of these practices helps meet identified desired conditions including State water quality standards and direction identified in the Forest Plan. They are derived from the Forest Service Manuals and Handbooks, research, etc. and have been shown to be effective tools for management of livestock grazing on Forest rangelands.

Monitoring

As an overview, monitoring activities can be divided into two categories: Forest Plan monitoring and project-specific monitoring. The National Forest Management Act (NFMA) requires that National Forests monitor their forest plans (36 CFR 219.11). The three categories of Forest Plan monitoring include:

- **Implementation Monitoring:** Used to determine whether the goals, objectives, standards and guidelines, and practices of the Forest Plan are implemented as specified in the Forest Plan.
- **Effectiveness Monitoring:** Used to determine whether Forest Plan practices and standards and guidelines, as designed and implemented, are effective in accomplishing the desired result.
- **Validation Monitoring:** Used to determine whether the data, assumptions, and estimated effects used in developing the Forest Plan are correct.

Forest scale effectiveness and validation monitoring are not typically conducted as part of project implementation. The ID Team identified implementation monitoring and project-specific effectiveness monitoring as important aspects of this project.

Implementation Monitoring

Implementation monitoring will be used to determine whether the selected alternative is implemented as planned in this document. If an action Alternative is selected, implementation monitoring will be conducted annually to determine whether the allotments are being managed in accordance with their term grazing permits. Allotment administrators will make field observations and document their findings in the individual permit and/or allotment files. These observations could include, for example, whether livestock were moved to other pastures or removed from an allotment before the maximum prescribed utilization parameters (pertaining to forage and browse utilization, stubble height, and streambank alteration) are exceeded. The field observations documented in the file will be summarized at the end of each year and a determination made whether on-the-ground management practices met the specified guidelines.

Administrative action will be taken (as specified in FSH 2209 16.21) if established utilization parameters are exceeded.

Very limited implementation monitoring will be required under the No Grazing Alternative. Monitoring will likely be conducted only periodically to determine whether trespass livestock were grazing on National Forest System lands within the project area. Action will be taken under 36 CFR 261.7 for any trespass discovered during implementation monitoring.

Project-specific Effectiveness Monitoring

Effectiveness monitoring will be conducted under either Action Alternative to determine whether the assumptions made in the analysis for this project are correct. Effectiveness monitoring will identify whether the actual effects of implementing the selected alternative were consistent with the effects originally projected. This monitoring will be conducted in cooperation with the permittees in the project area and will require the continued establishment and maintenance of long-term monitoring sites. The methods used to conduct effectiveness monitoring could include establishing permanent riparian photo points and running greenline and groundcover transects. Through adaptive management, effectiveness monitoring sites may need to be relocated or new sites established. Effectiveness monitoring will not be necessary under the No Grazing Alternative, since livestock grazing will be phased out under that alternative.

A detailed monitoring plan is incorporated into the AMP and attached as an appendix to this document.

Mitigation Measures

1. The Forest Service shall require once-over grazing (defined as ≤20% utilization) with loose herding, and only one night/one time use of bed grounds is allowed.

2. Sheep are not to be shaded or bedded within 200 yards of any standing or running water, should be watered at different location each time, and grazed rather than trailed to water,

3. Salting is restricted to areas outside of default RCA buffer zones.

4. Permittees are required to route sheep to avoid steep slopes, loose soil, watershed rehabilitation sites, and active gully or snowbank areas.

5. Herder camp use will not exceed five days time in one location and when camping within 200 yards of any standing or running water, herders will be required to tie pack and saddle stock to an elevated picket line.

6. Crossings of and watering by the dry band (after shipping, August 15) at Emma, Vienna, Johnson, and North Fork Big Smoky Creeks and their tributaries that support bull trout, shall occur only at sites designated by a qualified fisheries biologist. The fisheries biologist will select and designate sites prior to August 15 based on physical attributes that make these sites unlikely to support bull trout spawning. The sites will be

marked on the ground or described to the permittee in an unmistakable manner. At least one of the crossing sites on the Fairfield Ranger District will be inspected each year to ensure compliance and to confirm no bull trout are spawning. Tributaries of the identified streams will also be inspected by the biologist and some of these tributaries will be open to crossing or watering at any point because their small size precludes bull trout spawning. The requirement to use the designated crossing sites will be made a part of each year's Annual Operating Instructions and other applicable permittee communication.

7. Sheep permittees/herders will be required to follow the band routing and timing (as determined by Fairfield Range staff and detailed in the Annual Operating Instructions) that is primarily based on capability information and knowledge of sensitive areas.

8. At a June 1, 2009 Level 1 Streamlined Consultation Team Meeting, the permittee reporting requirements were revised to require that the permittee submit reports or maps every two weeks during the grazing season with sufficient detail that the range staff can determine forage utilization and compliance with herding instructions in a timely manner.

9. To monitor the 20% use standard established in 2002, an upland monitoring site (in the vicinity of Headquarters Camp Creek, on the Elk Creek allotment) for this band will be evaluated annually. The evaluation would be a visual estimate conducted by SNF range personnel within three weeks of band passage.

10. Fairfield Ranger District range staff will develop an annual written qualitative assessment of compliance with Forest Plan standards and guidelines, AMP management objectives, grazing permit terms and conditions, and AOI operating instructions.

11. New and existing populations of noxious weeds within and adjacent to the allotments should continue to be inventoried and treated under the Fairfield Ranger District's noxious weed program to eradicate the weed or to reduce the risk of spread.

Comparison of Alternatives

The comparison of alternatives draws together the conclusions from the information and discussion presented for the issues throughout this analysis and provides the results of the analysis in a brief summary.

Table 2-1 provides a summary of the effects of implementing each alternative. Information in the table is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives. The effects of implementing each alternative are described in detail in Chapter 3.

Table 3: Comparison of Alternatives

Vegetation

Element	Alternative 1 – No Grazing	Alternative 2 Proposed Action
Riparian – 2,000 acres (3% of Allotment Complex)	Rate of riparian recovery would be accelerated in the limited areas not currently meeting desired conditions.	No change from current. Riparian recovery would continue, but more slowly slower than under no grazing.
Upland Range -8,663 acres (12.5% of Allotment Complex)	Minimal changes from current conditions. Some increased recovery in understory species in heavily used areas.	No change from current conditions. Recovery in understory species in heavily used areas may improve over time through adaptive management although likely more slowly than under no grazing.
Aspen – Regeneration	Aspen regeneration would increase in the limited locations where regeneration impacted by livestock. Aspen stands would not achieve desired condition without treatment or disturbance by fire.	Current conditions in aspen would remain. Aspen stands would not achieve desired condition without treatment or disturbance by fire.
Invasive Species	Long-term benefits from improvement of upland vegetation occur, reducing susceptibility to invasive species. However, decreased level of monitoring results in noxious weed populations being larger when discovered making successful control of populations less likely.	Disturbance from livestock continues to result in portions of allotment remaining more susceptible to noxious weeds and invasive annual grasses (cheatgrass) than without grazing. However, due to monitoring, there would be a greater ability to detect and treat weed populations.

Wildlife

Element	Alternative 1 – No Grazing	Alternative 2 Proposed Action
Deer and Elk (Big Game)	Slight, but not measurable, improvement to deer and elk habitat (increase in forage)	No change in current habitat conditions for elk and deer
Mountain Goats (Big Game)	Slight, but not measurable, improvement to mountain goat habitat (increase in forage)	No change in current habitat conditions for mountain goats
Bighorn Sheep (Big Game and Sensitive Species)	Potential for reintroduction increased	No change in current conditions for bighorn sheep
Pileated Woodpecker	Slight increase in aspen regeneration benefitting pileated	No change in current conditions for pileated woodpeckers

(MIS)	woodpecker habitat in the future	
Sage Grouse (MIS and Sensitive Species)	The area would remain outside the known range for sage grouse.	The area would remain outside the known range for sage grouse. No change in habitat for sage grouse from current conditions.
Lynx (ESA Threatened)	Potential for forage competition between livestock and prey species would be eliminated potentially increasing food availability	Potential for forage competition with prey species would continue to occur
Yellow-billed Cuckoo (ESA Candidate)	Potential habitat would remain lacking	Potential habitat would remain lacking
Wolverine (Sensitive Species)	Potential for forage competition between livestock and prey species would be eliminated potentially increasing food availability	Potential for forage competition with prey species would continue to occur
Northern Goshawk (Sensitive Species)	Potential for effects to prey species habitat would be eliminated potentially increasing food availability	Potential for effects to prey species habitat would continue to occur
Flammulated Owl (Sensitive Species)	Potential for effects to prey species habitat would be eliminated potentially increasing food availability	Potential for effects to prey species habitat would continue to occur

Fish and Aquatic

Element	**Alternative 1 – No Grazing**	**Alternative 2 Proposed Action**
Bull Trout (MIS & ESA Threatened)	Little to no change in bull trout occurrence or spawning is likely to occur	Little to no change in bull trout occurrence or spawning is likely to occur
Aquatic Habitat	Little or no change in fish populations expected to occur, overall habitat and water quality would be improved as negative effects from grazing are eliminated	Little or no change in fish populations expected to occur, overall habitat and water quality would be improved as negative effects from grazing are reduced through reduction of grazing intensity and meeting Forest Plan direction

CHAPTER THREE

Affected Environment and Environmental Consequences

This section summarizes the physical, biological, social and economic environments of the affected project area and the potential changes to those environments due to implementation of the alternatives. It also presents the scientific and analytical basis for comparison of alternatives presented in the chart above.

Overview of Affected Area

The affected environment is limited to the Anchustegui Allotment Complex analysis area. Elevations on the allotment vary from 5,600 feet to over 9,800 feet above sea level. Slopes on the lower elevation areas are mostly gentle and usually vary from 5 to 30 percent. The higher elevation areas are usually steeper and normally vary from 35 to 65 percent; Slopes up to 60 percent are generally considered suitable for sheep grazing. Precipitation for this area averages 16 to 25 inches and 60 to 70 percent of the precipitation occurs as snow. The nearest community to the analysis area is the town of Fairfield, which is about 15 air miles away.

The project area provides year-round dispersed recreation opportunities, primarily big game hunting, horseback riding, dispersed camping, and snowmobiling. Many of the recreationists come from the Wood River and Magic Valleys and to a lesser degree from the Treasure Valley area. Most of the trails are open to trail motorcycle use. Corridors along main roads within valley bottoms with sizable flood plains are considered visually sensitive.

Air quality is usually excellent, because this area is removed from human population centers. However, smoke can accumulate from seasonal burning and periodic wildland fires.

The entire area is situated within the fourth order South Fork Boise River subbasin. Land within the Little Smoky Creek Allotment drains mainly into Little Smoky Creek. Skunk Creek, Elk Creek, and Johnson Creek Allotment areas drain mainly into the South Fork Boise River. Paradise/Calf and Skillern Allotments drain mainly into Big Smoky Creek. Water quality is good to excellent and is at low to moderate risk primarily from disturbance activities related to roads, livestock grazing, and dispersed recreation and secondarily due to past mining, grazing, and logging activities.

The surface geology is predominantly of granitic origin. Soils are generally sandy loams or loamy sands and have moderate to high erosion potential and moderate productivity. Heavy sheep grazing in the early 20th century caused heavy erosion and topsoil loss that will not be recouped except over geologic time scales. Geomorphic integrity is at moderate to high risk due to the inherent erosion potential combined with spring runoff or high intensity storm events.

Overview - Livestock Management & Distribution

The Anchustegui Allotment complex area covers approximately 69,000 acres of National Forest land. Most of this acreage is accessible to livestock. There are about 4,500 acres of private property in-holdings included as part of this total acreage. This private property is unfenced mining land located in upper Elk and Vienna Creek drainages within the Elk Creek and Johnson Creek Allotments.

One permittee (Anchustegui Sheep Company) is currently permitted to graze 900 ewes with lambs from June 10th through September 8th. The current term grazing permit was issued in 2001 and expires in 2010. Sheep are generally trucked a few miles north of Couch Summit around the 10th of June and are unloaded next to the Five-Points Campground where they immediately climb to higher range and start grazing on the Little Smoky Allotment. Rotation through the remaining allotments normally occurs before trailing off National Forest in the first part of September. Lambs are normally shipped from the South Fork Boise River corral around the 10th of August.

Some flexibility in authorized use is allowed for weather conditions, range readiness, and livestock needs. If the forage is fully utilized or the Forest Service determines that continued grazing will have detrimental effects, the permittee will be required to move livestock earlier than anticipated.

Prior to the Sawtooth Forest Plan being amended in 2003, a Site-Specific Range Capability Analysis (Hofeldt, 2002) was completed in 2002. A tentative grazing capacity was calculated for the allotments in 2008 using the 2002 site-specific capability analysis. The 2003 Forest Plan capability analysis also identified acres of capable rangelands.

The site-specific method identified a total of 17,312 acres as capable and the Forest Plan method identified 11,169 acres as capable for grazing on National Forest lands within the Anchustegui Allotment Complex. The capable acres for both methods are also defined as suitable for grazing. Analysis and tentative grazing capacity calculations indicate a total of 5,863 and 5,533 head months (HMs) respectively of available forage across the allotment. Head months were calculated based on ewes with lambs consuming 8.25 pounds of dry weight forage each day.

The current grazing permit is for 900 head of ewes with their lambs from June 10th through September 8th, equivalent to 2,693 HMs. This number is well below capacity for both the Site-Specific Range Capability Analysis and tentative grazing capacity.

Only four functioning livestock water developments are associated with the allotments in the Anchustegui Grazing Allotment Complex.

Key Issue –Vegetation

Affected Environment

Range types on the allotments are comprised of wet and dry meadows, mountain big sagebrush on south and west slopes, mountain shrublands dominated by chokecherry and snowberry in higher elevation areas and east slopes. Forested vegetation types include scattered stands of deciduous trees dominated by aspen, and coniferous forest dominated by north-slope Douglas-fir, high elevation subalpine fir, lodgepole pine, and localized mesic Engelmann spruce.

Riparian

Additional analysis of riparian habitat is contained within the fisheries section of this document. Riparian Conservation Areas (RCAs) cover about 16,583 acres or about 24% of the entire 68,966 acre analysis area. The area within RCAs is determined using Geographic Information Systems (GIS), by calculating a default 300 feet buffer on each side of perennial streams and a 150 feet buffer on each side of intermittent streams. However, it is estimated that actual riparian vegetation communities only cover about 2,000 acres or about 3% of the allotment complex. While this is a small portion of the entire area, it is probably the most important area of resource concern related to livestock grazing management. Riparian vegetation common in the allotments includes willows, alders, aspen, conifer species, sedges, and grasses.

On July 1, 2008, the Interdisciplinary Team for the Anchustegui Allotment Complex Analysis developed specific desired conditions (DCs) for non-forest riparian vegetation within the allotment complex (per direction in the Forest Plan Appendix A page 16). The Anchustegui S&G Allotment Complex Desired Future Condition for Riparian Plant Communities document states that within the Anchustegui Allotment Complex, the DC is a greenline succession status rating of 51 (upper to mid-seral) or greater and a greenline bank stability rating of 6 (upper-mid) or greater for riparian systems (project record). Annual allotment inspections and ocular estimates conducted by Fairfield Ranger District range staff determine whether the DC is being met. If Forest Plan standards and guidelines along with Terms and Conditions outlined in the Annual Operating Instructions are met; the DCs for riparian vegetation are likely to be met.

Agency personnel have reviewed many of the streams on the six allotments to better understand baseline conditions and riparian management issues. Inspection notes pertaining to range condition and sheep impacts are contained in the project record. Riparian conditions on the allotments are generally satisfactory or are improving. Observations from allotment inspections indicate riparian conditions have improved over the last two decades. This improvement can be attributed to permittee / herder compliance with the terms and conditions of the Term Grazing Permit (including once-over-grazing), significant reductions in permitted numbers and the period of grazing, and the application of rest rotation management. Localized riparian concerns are still sometimes created where sheep bands cross or water from streams.

Other localized impacts to riparian vegetation caused by wood cutting, poorly designed or located roads and dispersed camping are evident in the allotment complex. Some of these impacts that may need attention in the future are the ones that exhibit signs of localized soil compaction, loss of riparian vegetation, animal waste issues, and bank erosion. Places that occasionally exhibit these issues occur within travel corridors where sheep trail and camp sites are sometimes shared between sheep herders and the general public.

Upland Range

Approximately 10% of the Anchustegui Allotment Complex is dominated by mountain big sagebrush (*Artemisia tridentata vaseyana*) and 2.5% is dominated by mountain brush species (snowberry, chokecherry, ceanothus, and currants) as determined by 1994 satellite imagery data (LANDSAT). Common understory species in non-forest areas within the allotments include blue bunch wheatgrass, elk sedge, needle grasses, and several forb species.

Current densities (canopy coverage) for sagebrush and mountain brush within the allotments are near desired conditions as outlined in Appendix A of the Forest Plan. Sagebrush density in the allotments is primarily a function of frequency of fire as influenced by fire suppression, not sheep grazing. Domestic sheep grazing of the Anchustegui Allotments has little influence on sagebrush density since sheep do not eat sagebrush during the season of use of the allotments, and the terms and conditions of open loose herding and light-once-over grazing does not result in significant trampling of sagebrush.

In 2001 and 2002, nested frequency transects were conducted to determine upland conditions in the Anchustegui Allotment Complex. These sites were established on the Skunk Creek, Paradise/Calf, Elk Creek, and Skillern Allotments. The data results revealed a sizable increase in ground cover at six out of seven of the study sites. Upland conditions at these sites appear to be improving and are either meeting or progressing towards the Forest Plan desired conditions.

Allotment inspections have revealed only short term soil displacement and very little grazing impact to upland vegetation. Management changes to these allotments including reduction of numbers and period of use and grazing restrictions (Forest Plan Standards and Guidelines and grazing permit Terms and Conditions) have resulted in minimal impacts to upland vegetation from grazing. Herding through certain topographic features such as narrow canyons or ridgetops occasionally results in concentrated use in localized areas.

Aspen

Aspen stands are scattered throughout the allotment complex and are not extensive in size (generally 1 – 3 acres or less of contiguous aspen). The majority of the conifer stands within the allotment complex have an aspen component. Stands without encroachment of shade tolerant conifers such as Douglas-fir are rare. Consequently the acres of pure aspen are only 262 acres or 0.4% of the allotment complex (LANDSAT data). Aspen stands in the analysis area are considered to be a common early seral component within conifer stands (mostly cool dry Douglas-fir Potential Vegetation Group-PVG 4 and cool dry Sub-alpine fir PVG 7).

The desired condition (DC) for species composition forest wide in PVG 4 is 4% to 13% aspen and 6% to 11% aspen in PVG 7 (Forest Plan – Appendix A). Current conditions in the Anchustegui Allotment Complex are below these desired conditions. Forest Plan direction applicable to Aspen includes Objectives #0632, 0718, 0823: "Restore the early seral aspen component to desired conditions, as described in Appendix A, to improve visual quality and wildlife habitat."

Some effects to aspen regeneration occur from livestock browsing of young aspen suckers. These effects are localized and limited to areas where sheep are herded, such as riparian areas where they water and where they sometimes seek shade during the middle of the day.

Where aspen is seral, it is maintained on the landscape by disturbance. Historically fire was the primary disturbance agent (Forest Plan). It appears that the primary causal factor for aspen not meeting the desired condition on the allotment is lack of fire. While livestock grazing has impacted aspen regeneration in some stands and does potentially reduce the chances of fire by reducing fine fuels, elimination of sheep grazing on these allotments, in and of itself, will not move the allotment towards DC for aspen.

Invasive Species

Less than one acre (out of nearly 70,000 acres in the allotment complex) of noxious weed infestation has been identified. Current infestations appear to be associated primarily with roads both on NF and private land. Occasionally Rush skeletonweed, spotted knapweed, and diffuse knapweed grow along roadways within the Little Smoky, Skunk Creek, and Paradise/Calf Allotments. Current infestations occur in sparse, very small isolated patches. Treatment along these roadways is conducted annually, and these weeds are continuously being eradicated at each treatment site. To date, no other species of noxious weeds have been discovered within any of the Anchustegui Allotments.

There is an inherently high risk of Rush skeletonweed establishment and spread due to the amount of drainage area susceptible to weed invasion (sparse vegetation and exposed soils) and the relatively high level of exposure from recreation traffic on roads and trails. The threats for new infestation and establishment are however lowered given the ongoing weed treatment efforts of the Fairfield Ranger District and the Camas Creek Cooperative Weed Management Area (CWMA).

Cheatgrass, an invasive annual grass, can be found on some non-forested, south-facing slopes within the allotment complex. Fortunately it is not extensive in the area. While cheatgrass is not listed as a noxious weed and is not treated, it is of concern due to its ability to alter fire regimes and permanently affect rangeland condition. Naturally erodible and dry south-facing slopes can be prone to cheatgrass and the resulting fire regime alteration, especially where historic and/or current grazing effects exist. South-facing slope cheatgrass and fire regime changes may be of greater concern in the future due to climate change. Current sheep grazing may increase the likelihood of cheatgrass persistence on some south-facing slopes in the allotment complex due to soil disturbance.

The Forest Plan direction applicable to Noxious Weeds includes:

- Objective 0725: "Prevent and control the establishment of noxious weeds, with emphasis on rush skeleton weed, spotted knapweed, and diffuse knapweed."

This objective is being met as described above.

Vegetation Environmental Consequences (Effects)

Riparian

Direct & Indirect Effects of Alternative 1 (No Grazing) on Riparian Vegetation

Although general riparian conditions have not been identified as needing improvement, this alternative would accelerate the rate of riparian recovery in those areas that receive impacts when sheep come to water. The only hindrance to meeting this objective would be from other influences outside of the scope of this analysis.

The present condition of riparian vegetation is meeting the DC. Regardless of grazing, other

uses such as dispersed camping will continue to affect riparian condition. Under this alternative, Forest Plan direction is met for riparian vegetation.

Direct & Indirect Effects of Alternative 2 (Proposed Action) on Riparian Vegetation

This alternative would also accelerate the rate of riparian recovery in those areas needing improvement through continued adaptive management of livestock grazing. Overall improvement in riparian vegetation composition would help decrease streambank instability and erosion, improve water quality, and improve aquatic habitat for native fish (see Bull Trout- Effects section in this EA). If the results of monitoring suggest progress is not happening fast enough or not at all, then adjustments in livestock numbers, duration of grazing, changing grazing routes, etc. (adaptive management) would be initiated to help reach the desired riparian condition.

Under Alternative 2, the rate of riparian recovery would be slower than it would be for Alternative 1. It is expected that compliance with the Term Grazing Permit Terms and Conditions and the Forest Plan Sandards and Guidelines would continue the positive trend in riparian condition. This alternative meets Forest Plan direction for riparian vegetation.

Cumulative Effects of Proposed Action on Riparian Vegetation

Past uses that have had an impact on riparian habitat include road building, recreation use and historic sheep grazing. Historic sheep grazing on the District degraded upland and riparian habitats due to the numbers of sheep. Erosion, topsoil loss, and vegetation species composition changes all resulted. Isolated impacts to riparian vegetation include wood cutting, roads, and dispersed camping. These effects are localized soil compaction, loss of riparian vegetation, reduced large woody debris recruitment into stream channels, waste issues, and bank erosion.

Recreational and other uses of riparian areas are likely to increase in the future, resulting in further impacts to riparian vegetation. Travel planning on the Fairfield Ranger District was initiated in 2004 and implementation began in 2008. Implementation is expected to reduce the impacts on riparian areas, and eliminate user developed trails. With better control of recreation related impacts through travel planning and the reduction of sheep related impacts on riparian and aquatic habitat under Alternative 2, cumulative effects to riparian and aquatic habitat should be reduced in the reasonably foreseeable future. Under Alternative 1, the reduction of cumulative effects should even be greater given the contribution of impacts to riparian and aquatic habitat would be eliminated entirely. However, given the current and expected level of recreation use, wood cutting and impacts from existing roads, localized riparian impacts will continue to occur to some degree under either alternative

Upland Range

Direct & Indirect Effects of Alternative 1 (No Grazing) on Upland Vegetation

Under this alternative, understory vegetation may improve (composition and density) over current conditions in localized areas. Under this alternative, Forest Plan direction is met for upland vegetation.

Direct & Indirect Effects of Alternative 2 (Proposed Action) on Upland Vegetation

Under this alternative, understory vegetation would continue to meet Forest Plan direction, but isolated areas may not recover as quickly as under the No Grazing Alternative.

Cumulative Effects of Proposed Action on Upland Vegetation

Only one project (Upper South Fork Boise River Vegetation Management Project) is currently planned within the Anchustegui Allotment Complex in the foreseeable future that could affect sagebrush density. During prescribed fire activities in aspen, a very slight amount of sagebrush may be affected. Ongoing weed treatment with herbicides would not affect sagebrush canopy cover due to the very small acreage sprayed annually.

Historic sheep grazing on the Fairfield Ranger District is thought to have degraded upland rangelands due to the sheer numbers of sheep. Historic levels of sheep grazing resulted in erosion, topsoil loss, and vegetation species composition changes. Fire suppression efforts over the past 100 years may also have affected upland rangelands by reducing the frequency and size of potential wildfires. This may also have affected species composition. Historic mining and road building also has potentially affected small acreages of upland rangelands.

Continuation of sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would not add significantly to cumulative effects to upland rangelands due to the ability to spread out grazing impacts over a large area (ratio of sheep compared to size of the allotment complex) and due to the light-once-over management practices.

Aspen

Direct & Indirect Effects of Alternative 1 (No Grazing) on Aspen

The elimination of livestock grazing will result in increased regeneration within the few aspen stands where livestock browsing of young aspen suckers has occurred. However, elimination of livestock grazing, alone, will not result in an increase in the aspen component towards desired conditions. Without fire or some other large scale vegetative treatment, the aspen component within the allotment will continue to decline as a result of conifer encroachment, insects, and aspen blight.

Forest Plan direction applicable to Aspen including Objectives #0632, 0718, 0823: "Restore the early seral aspen component to desired conditions, as described in Appendix A, to improve visual quality and wildlife habitat," would continue to not be met under this alternative (without fire or other treatments).

Direct & Indirect Effects of Alternative 2 (Proposed Action) on Aspen

Under the Proposed Action, effects to aspen stands will be similar to Alternative 1 with the exception that reduced regeneration will continue to occur in those few stands where livestock browsing on young suckers occurs. As under Alternative 1, the aspen component will continue to decline without fire or some other large scale vegetative treatment. Elimination of livestock grazing, alone, will not allow conditions to move towards DC.

Forest Plan direction applicable to Aspen including Objectives #0632, 0718, 0823: "Restore the early seral aspen component to desired conditions, as described in Appendix A, to improve visual quality and wildlife habitat," would continue to not be met under this alternative (without fire or other treatments).

Cumulative Effects of Proposed Action on Aspen

Only one project (Upper South Fork Boise River Vegetation Management Project) is planned within the Anchustegui Allotment Complex in the foreseeable future that would affect aspen. This project would treat up to 800 acres of aspen with prescribed fire to increase regeneration of the stands. No livestock grazing within burned areas will be allowed for two years post-fire.

Past fire suppression efforts on the Fairfield Ranger District have resulted in conifer encroachment of aspen and many decadent aspen stands with reduced regeneration. Relative to meeting the desired condition for aspen under either alternative, movement towards desired conditions would only be achieved if wildland fire, prescribed fire treatments or other vegetative treatments occur. Sheep grazing on the Anchustegui Allotment Complex does not add significantly to cumulative effects to aspen on the Fairfield Ranger District due to the very limited amount of browsing of aspen shoots (regeneration) that occurs.

Invasive Species

Direct & Indirect Effects of Alternative 1 (No Grazing) on Invasive Species

Alternative 1 would provide for some amount of long-term benefit and habitat recovery of upland vegetation found within the boundaries of the Anchustegui Allotment Complex potentially reducing weed and invasive species susceptibility. However, under the No-Action Alternative and the absence of livestock grazing, the level of monitoring of noxious weeds in more remote areas of the allotment complex by range managers would likely be reduced. Weed populations would tend to be discovered after they become larger and more costly and difficult to control. Successful control would therefore be less likely.

The main weed of concern for this area is Rush skeletonweed, a highly invasive windborn species, which is currently found in very small numbers along established roadways. Under Alternative 1, this species will likely remain in isolated, very small populations adjacent to roads and trails, but may develop into larger patches in isolated areas given that range managers would be monitoring the area less frequently. The potential for livestock to introduce this species into more remote areas of the allotment will be eliminated however. Current weed management plans would continue to be used to direct treatment and containment strategies. The ability to detect and monitor weed populations will influence the size and density of new weed populations. Under this alternative, Forest Plan direction would continue to be met for noxious weed management.

Direct & Indirect Effects of Alternative 2 (Proposed Action) on Invasive Species

This alternative would allow livestock grazing to continue to serve as a vector for spread of noxious weeds. However, as described in the Affected Environment section, noxious weed infestations in the allotments are primarily associated with travel corridors. Disturbance from

livestock grazing may result in portions of the allotments remaining more susceptible to noxious weed and non-native plant invasion and establishment.

Under Alternative 2, Rush skeletonweed will likely remain in isolated, small populations adjacent to roads and trails given the ability for range mangers to detect new infestations in conjunction with allotment inspections. However, risk of spread and establishment for this species may be higher in remote areas as a result of livestock use, because it could become established without detection.

Range management under this alternative will allow for continued tracking of non-native plant populations and containment and treatment of these isolated populations along roads and trails. Current weed management plans will be used to direct treatment and containment strategies. Under Alternative 2, livestock may serve as wide ranging vectors, given the allotment boundaries, for the invasive species and non-native plants. Livestock use and associated impacts (soil disturbance) may facilitate a higher risk of non-native plant species becoming established in remote areas, however; the probability for detection and treatment of new populations is higher than in the no action alternative. Under this alternative, Forest Plan direction would continue to be met for noxious weed management.

Cumulative Effects of Proposed Action on Invasive Species

Past, current, and future activities occurring on the Fairfield Ranger District such as dispersed recreation, firewood gathering, livestock grazing, mining, timber harvest, prescribed fire, road and trail maintenance, etc. in addition to activities occurring on private land inholdings such as construction of cabins, all contribute to the potential for noxious weed and invasive species establishment and spread. This is a result of ground disturbance, vegetation species alteration, and the transport of noxious weed and/or invasive annual grass seed. Climate change may result in drier future conditions which may influence invasive species abundance and persistence.

Recreational uses and impacts will likely increase given current recreational use trends. OHVs, ATVs, motorcycles, and other modes of transportation increase the incidence of non-native plant introduction and establishment. Such vehicles may encounter infestations within the allotments or along adjacent trails or roads and may serve as vectors to more remote locations. Additionally, these vehicles could introduce new highly invasive species from other sources such as private land, Bureau of Land Management (BLM) land, other National Forest lands, or State lands. Introductions of such species in remote locations could lead to new invasive species establishing within the allotments and may make treatment and containment difficult. Compliance with motorized travel restrictions should reduce the potential for noxious weed introduction in more remote areas away from designated travel routes.

The risk of exotic plant infestations occurring within wildfire areas is a concern under all the alternatives. Only one small scale prescribed fire activity has been identified at this time (Upper South Fork Boise River Vegetation Management Project), and there are no weed infestations known to occur within the proposed prescribed fire areas and weed mitigation measures will be adhered to. Wildland fire is always a risk and could contribute to the spread of established populations. The 2008 South Barker Wildland Fire Use Fire burned approximately 37,000 acres to the west of the Anchustegui Sheep Allotment Complex and due to increased susceptibility of

weeds in the fire area; the potential is increased for weeds and invasive species to spread into the neighboring allotments.

While the potential for establishment of noxious weed infestations in more remote areas would be somewhat higher under implementation of Alternative 2 than under Alternative 1 (given the continuation of grazing), the primary vector for noxious weed establishment and spread would continue to be within travel corridors and related to motorized travel.

Key Issue – Wildlife

Issues generated internally and externally necessitated the analysis of the effects of the proposed allotment plan revisions on wildlife habitat for big game (including elk, deer, mountain goat, and bighorn sheep), Sawtooth National Forest Management Indicator Species (MIS); and Threatened, Endangered, and Region 4 Forest Service Sensitive Species (TES). Direct and indirect effects are analyzed at the geographic scope of the six Anchustegui Sheep Allotments proposed for renewal for all species (Anchustegui Sheep Allotment Complex). Cumulative effects are analyzed at the geographic scope of the Fairfield Ranger District. Cumulative effects analysis takes into account all past, present, and foreseeable future actions.

Affected Environment

Big Game

Elk and Deer

Rocky Mountain elk (*Cervus elaphus*) and mule deer (*Odocoileus hemionus*) are known to occur throughout the Anchustegui Sheep Allotment Complex. Elk occur in the analysis area year-round while mule deer migrate out of the Anchustegui Sheep Allotment Complex and move south and southwest off the Fairfield Ranger District for the winter. Elk winter range for heavy snow years in the Anchustegui Allotment Complex is limited to lower elevations within the Little Smoky, Paradise/Calf, Skunk Creek, and Skillern Allotments (see Figure 4). Elk may be occasionally observed in other areas within the analysis area during light snow years. Essentially the entire analysis area is elk and deer summer and fall habitat. Both elk and deer utilize a variety of habitat including both forested and non-forested habitat within the analysis area.

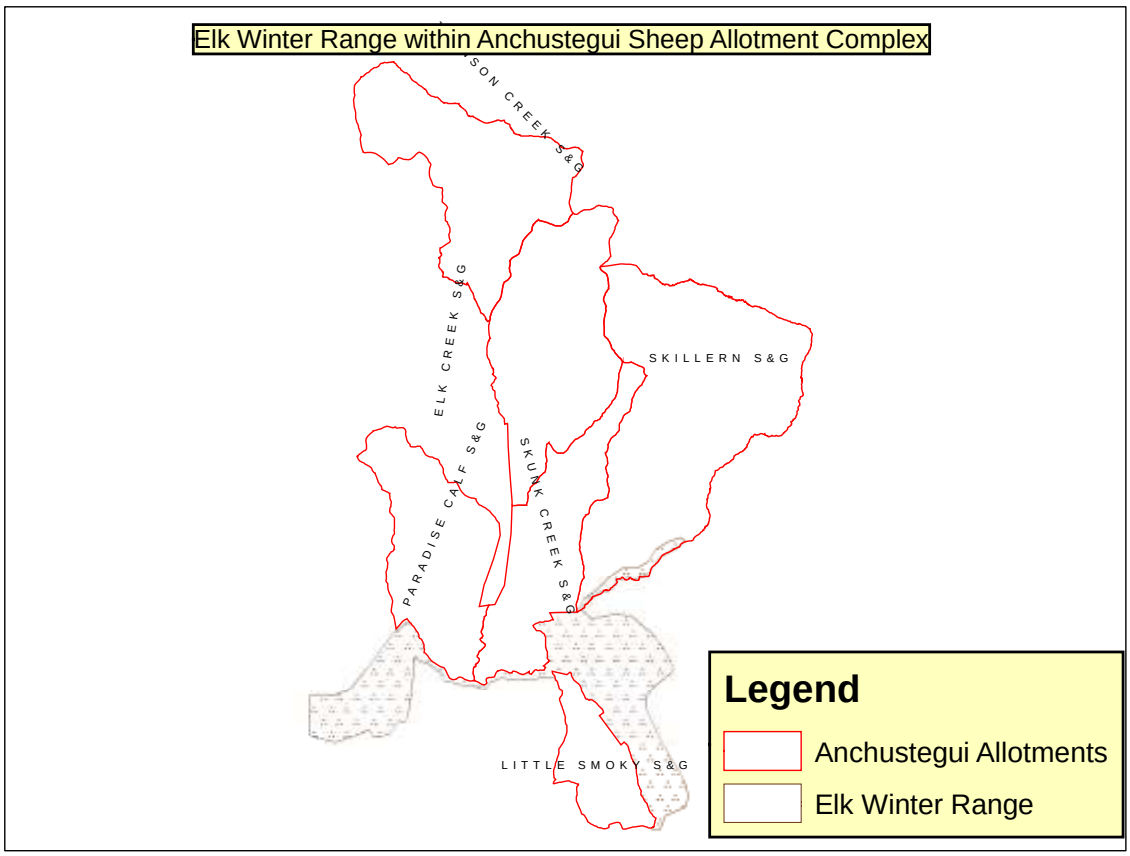

Figure 4: Elk winter range in the Anchustegui Sheep Allotment Complex

Elk within the analysis area are descendants from elk reintroduced into the Boise River drainage by Idaho Fish and Game (IDFG) in 1915 (IDFG 2001). Due to over harvesting of elk in the late 1800's, the previous population of elk was thought to be extirpated. Throughout the 1920's and 1930's, elk increased in numbers and expanded in distribution. Controlled hunting of elk was authorized starting in 1941. Since this population was reintroduced, the genetic pool of elk that likely migrated south out of the area for winter was lost. Concern regarding the lack of suitable winter range, overuse of south-facing slopes and riparian bottoms, and the high winter mortality of elk led to winter feeding from Featherville to Little Smoky Creek in 1943 and has continued since that time.

Mule deer were never extirpated from the analysis area. Since the genetic pool of deer that migrated out of the analysis area for winter remains, the historical migration patterns still occur.

The Fairfield Ranger District Analysis Area is within the Idaho Fish and Game (IDFG) Big Game Hunt Units 43. IDFG manages controlled hunt permits for antlered and antlerless elk in Hunt Unit 43, and manages a general buck season and controlled hunt permits for doe mule deer.

Populations for elk in Unit 43 are currently below the IDFG's management goals (Berkley 2007). Elk populations in Unit 43 may have been affected by the number of tags sold in the late 1990's and early 2000's which may have been excessive. Seasons and tags were based primarily

on winter feeding counts until it was learned through radio-telemetry tracking that many of the elk feeding at the stations in the South Fork Boise River actually migrated down from the Stanley area. Reduced numbers of elk fed at winter feed station on the Fairfield Ranger District and increased numbers of elk observed during the wintertime at lower elevations off the District are likely a result of increased wolf predation at winter feed stations over the past decade. This has likely caused elk to migrate to areas outside of Unit 43.

IDFG has population goals for mule deer that cover multiple hunt units (Units 43, 44, and 45). Because counts are conducted on wintering areas in Unit 45, there are no population goals specific to only Unit 43. Populations of summer and fall deer within these units are meeting IDFG's management goals (Berkley 2007).

On the Fairfield Ranger District, cow elk generally have their calves in the 2nd and 3rd week in May and doe mule deer generally have their fawns during the first and second week in June, based on personal observations and reports of observations from Forest Service field personnel. Elk calving and deer fawning occur annually throughout the Anchustegui Sheep Allotment Complex. Since domestic sheep are not released onto the Anchustegui Sheep Allotment Complex until June 10 or later, female elk and deer are not disturbed by sheep trailing while giving birth or young are not yet mobile.

Although there is some dietary overlap between domestic sheep and elk and deer, current sheep grazing within the Anchustegui sheep Allotment Complex does not appear to be having any negative effect to elk or deer habitat, winter range, or fawning/calving areas. This is likely due to the low numbers of sheep (one band) grazing over such a large area (six allotments; 69,000 acres).

Mountain Goats

Mountain goats (*Oreamnos americanus*) and their habitat occur within higher elevation areas of the Anchustegui Sheep Allotment Complex (see Figure 5). Nearly the entire Johnson Creek and Elk Creek Allotments, and the far north eastern portion of the Skillern Allotment, contain mountain goat habitat as mapped by the Sawtooth National Forest. Forest Service records and aerial surveys conducted by IDFG (1981, 1990, 1994, 1996, 2001, and 2004) document mountain goats within these three allotments.

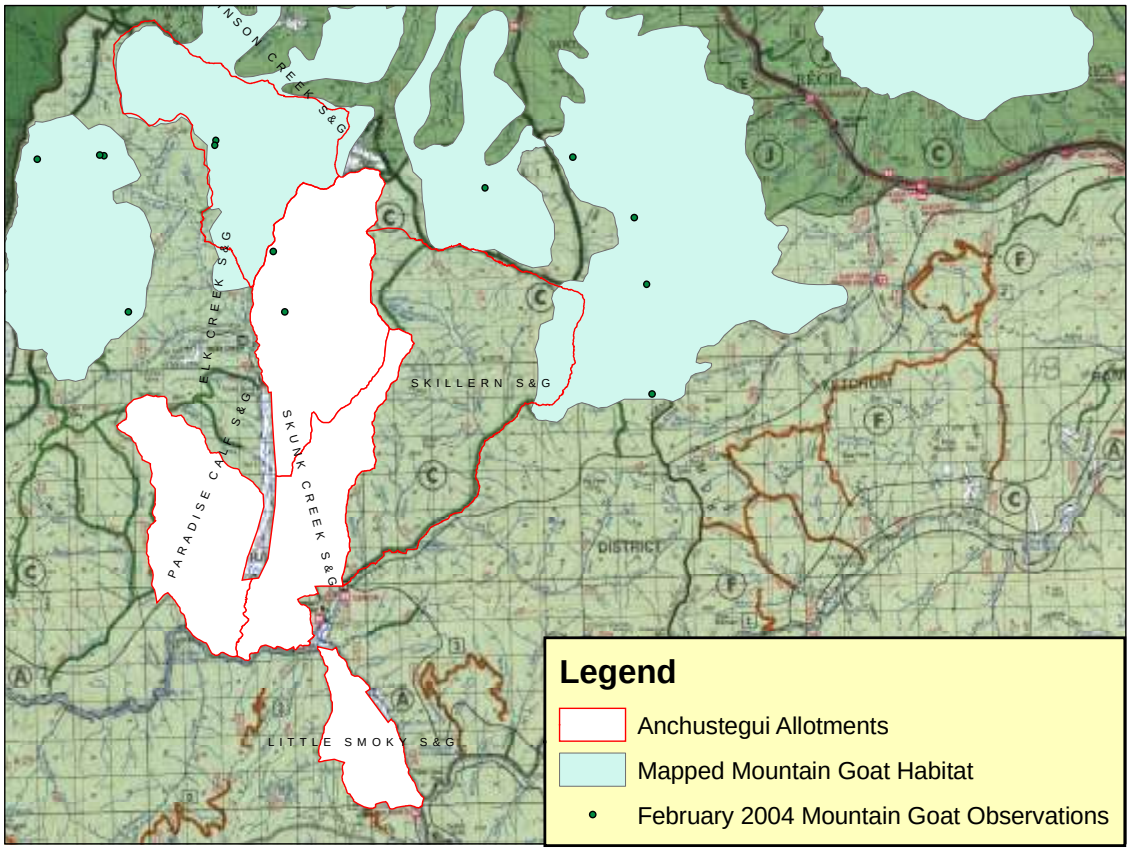

Figure 5: Mapped Mountain Goat Habitat & 2004 Mountain Goat Observations within the Anchustegui Allotment Complex

The Anchustegui Allotment Complex is located in IDFG's Hunt Unit 43. Based on IDFG helicopter survey results, mountain goat populations in Hunt Unit 43 experienced a sharp decline in the early 1990's and has remained at low, stable numbers since that time (IDFG 2007). The reason for the decline is unknown. Mountain goat hunting in Hunt Unit 43 was closed 1995-2004. Due to changes in mountain goat hunt area boundaries in 2005, Hunt Unit 43 was divided and combined with adjacent units (Hunt Unit 36 and 48). Since 2006, very limited hunting of mountain goats within the hunt areas encompassing the Anchustegui Allotment Complex has been allowed (two tags for hunt area 43 and two tags for hunt area 48). Hunter success in this area is very high (100%).

Since sheep trailing routes in the Anchustegui Sheep Allotment Complex overlap with occupied, year-round mountain goat habitat, competition for forage between mountain goats and domestic sheep likely occurs in localized areas (on the Johnson Creek, Elk Creek, and Skillern Allotments). The level of competition does not appear to be negatively affecting mountain goat populations on these allotments currently, likely due to the dispersed nature of sheep grazing on these allotments (one sheep band for six allotments).

Bighorn Sheep

There are no known populations of Rocky Mountain bighorn sheep (*Ovis canadensis*) within the Anchustegui Sheep Allotment Complex or on the Fairfield Ranger District as a whole. It is likely that the Fairfield Ranger District was historical habitat for bighorn sheep prior to the arrival of Euro-American settlers in the 1800's. An unusual sighting of a bighorn ram was made on the Fairfield Ranger District at the headwaters of Bear and Skeleton Creeks, within two miles of the Skunk Creek Allotment in 2005. IDFG has no plans to reintroduce bighorn sheep into the Fairfield Ranger District (Toweill 2005). The nearest known population of bighorn sheep occurs over 20 air miles to the northeast of the analysis area on the Sawtooth National Recreation Area and Salmon-Challis National Forest.

Since no existing bighorn sheep populations exist nor are there any plans to reintroduce bighorn sheep onto the Anchustegui Sheep Allotment Complex, current domestic sheep grazing has no direct effect on bighorn sheep. Current sheep grazing may be inhibiting natural recolonization of bighorn sheep, however, and certainly reduces the likelihood of IDFG planning a bighorn sheep transplant onto the Fairfield Ranger District.

Terrestrial Management Indicator Species (MIS)

MIS are used to assess effects of management activities on groups of species with similar habitat requirements. The following terrestrial wildlife species are Sawtooth National Forest MIS species (USDA Forest Service 2003): Pileated woodpecker (*Dryocopus pileatus*) and Greater sage-grouse (*Centrocercus urophasianus*). Pileated woodpeckers represent species requiring older forest habitat with large diameter trees, and sage-grouse represent species requiring sagebrush-steppe habitat. Direct, indirect, and cumulative effects to MIS species as a result of implementing the proposed action are addressed. A site specific MIS capability analysis as per 36 CFR 219.20 was completed and can be found within the Wildlife Specialist Report for the Anchustegui Sheep Allotment Complex (Skinner 2008; see project record, Fairfield Ranger Station).

Pileated Woodpecker

The Anchustegui Allotment Analysis Area contains approximately 7,700 acres of potential habitat for pileated woodpecker nesting, foraging, and roosting based on GIS habitat modeling completed by the Fairfield Ranger District (see Figure 6). This was determined using the Sawtooth National Forest GIS model for Canada lynx denning habitat as a surrogate for potential pileated woodpecker habitat because habitat characteristics are similar for the two species. Pileated woodpeckers and/or their foraging evidence have been observed in each of the six allotments of the Anchustegui Sheep Allotment Complex (Skinner Wildlife Surveys 1996-2008).

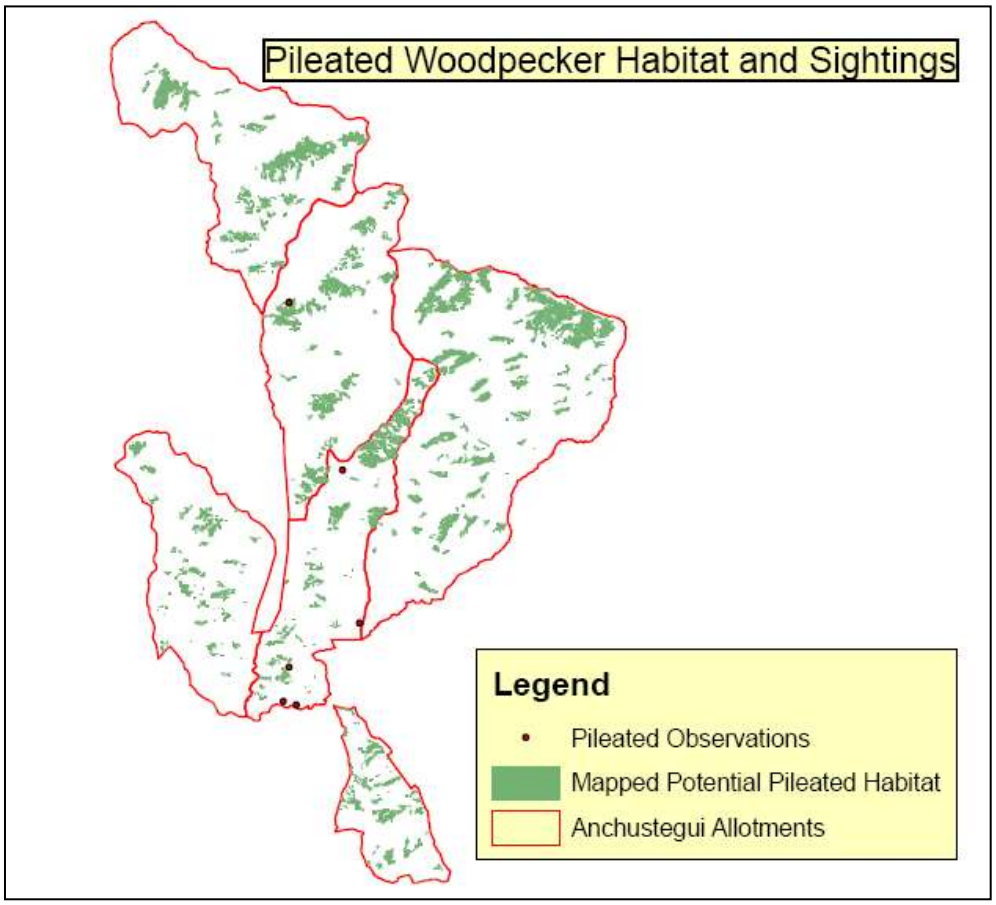

Figure 6: Pileated Woodpecker Habitat and Sightings within the Anchustegui Complex

Pileated woodpeckers need large diameter snags (>20") in relatively closed-canopied (>50%) forests for nesting (Bull et al. 1986) and dense canopy cover for roosting (>60%) (Bull et al. 1992). They also require large diameter (>20") trees for foraging and will forage frequently on insects found in downed logs greater than 10" in diameter. Pileated woodpeckers feed on insects, which inhabit trees, both live and dead. Carpenter ants and bark beetles are commonly found in their diets (Bull et al. 1986).

In addition to closed-canopied conifer stands, pileated woodpeckers on the north end of the Sawtooth National Forest are known to use aspen stands for foraging and nesting. Pileated woodpeckers have been observed nesting within aspen trees in several locations on the north end of the Sawtooth National Forest including within the Anchustegui Sheep Allotment Complex. Approximately 300 acres of isolated aspen stands occur within the Anchustegui Sheep Allotment Complex as determined by the Sawtooth National Forest GIS cover type layer. As with aspen stands across the Sawtooth National Forest, lack of fire, conifer encroachment, and/or grazing impacts may be limiting aspen regeneration within the allotments, but site specific monitoring has not been conducted to confirm this. The 300 acres of aspen is a minor component out of the 7,700 acres of potential pileated woodpecker nesting habitat in the analysis area.

In 2004, monitoring efforts to determine long-term population trends for pileated woodpeckers on the Sawtooth National Forest was initiated. One of the ten survey routes on the Fairfield

Ranger District is located within the Anchustegui Sheep Allotment Complex (Skunk Creek Route). One pileated woodpecker was recorded on the Skunk Creek Route in 2007 and one in 2008. No long term population trends have been determined from the 6 years of data collected on the Fairfield Ranger District or for the entire north end of the Sawtooth National Forest. Data collected on the Fairfield Ranger District is displayed in Table 3-4.

Table 4: Results of Pileated Woodpecker Transects on the Fairfield Ranger District

Survey Route	2004	2005	2006	2007	2008	2009
Barker Gulch	0	4	0	0	0	0
Shake Creek	0	0	0	1	0	2
Willow Creek	0	0	0	0	2	1
Presidents Trail	0	0	1	2	1	0
Boardman Creek	0	0	0	0	0	0
Skunk Creek	0	0	0	1	1	0
Axolotl Mine	0	0	0	0	0	0
S. Fork Soldier	0	1	1	0	0	2
Worswick Creek	0	1	0	1	1	1
Williams/Rosetta	0	3	0	5	0	0
Total	0	9	2	10	5	6

The population trend for pileated woodpeckers across the entire state of Idaho, 1966 to 2003 can be found in Figure 7. This information comes from the US Geological Survey, Patuxent Wildlife Research Center, North American Breeding Bird Survey (Sauer et al. 2004). As noted on the website, there are important deficiencies in data, likely due to low sample size. It appears that the overall statewide population trend is upward.

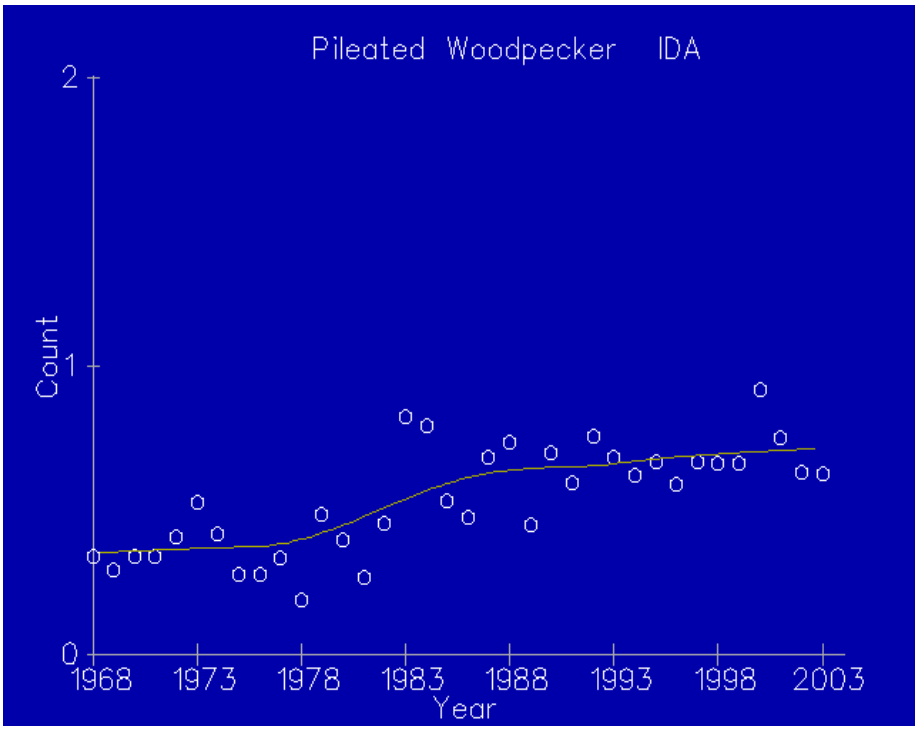

Figure 7: Idaho Population Trends for Pileated Woodpeckers

Domestic sheep grazing does not likely directly affect pileated woodpeckers using coniferous forest. While sheep may move through and "bed" under coniferous forest, they do not spend much time there since little forage for livestock is available under most coniferous stands. Short term and localized disturbance to pileated woodpeckers could occur as a response to sheep herders moving sheep through such stands. No known dietary overlap occurs between sheep and pileated woodpeckers, and no direct effects to nest or foraging snags, carpenter ants, or other components of pileated woodpecker habitat in coniferous forest is known.

Sheep can negatively affect aspen regeneration by over utilization of young aspen sprouts. This has the potential to impact pileated woodpeckers by reducing the amount of aspen available as habitat for the species if aspen stands are not regenerated. While this has likely occurred historically within the Anchustegui Complex Allotments, any current over utilization in the allotment complex is unknown. If any over utilization of aspen occurs, it is rare and localized.

Sheep grazing can indirectly affect pileated woodpecker habitat by altering fire frequencies of forested stands. Where fine fuels are removed by grazing, the potential for wildfire is reduced and therefore may indirectly benefit pileated woodpecker habitat in coniferous stands by protecting them from stand-replacing wildfire. This is conversely true for aspen stands, since wildfire regenerates aspen stands and protects them from successional take over by conifers.

Appendix A of the Sawtooth Forest Plan outlines desired conditions for forested vegetation for the Sawtooth National Forest (USDA Forest Service 2003). Of the four, 5th level Hydrologic Units (HUC's) that the Anchustegui Sheep Allotment Complex occurs within, three of these HUC's are not meeting the desired condition for large tree size class based on the 2004 Sawtooth National Forest Plan Implementation Vegetation Summaries. Less than 20% of the forested vegetation in these HUC's (primarily Douglas-fir), are dominated by large trees (>20 inches diameter at breast height). This has potential implications to pileated woodpecker habitat. It is unlikely that this is due to sheep grazing. Quantitative snag and coarse woody debris measurements have not been completed in these HUC's to date, and so it is unknown if Appendix A desired conditions for snags are currently being met. Qualitative data from general wildlife surveys indicate sufficient snag density and size to support pileated woodpeckers in many forested areas of the Anchustegui Sheep Allotment Complex.

Greater Sage-grouse

The Anchustegui Allotment Complex occurs outside the known range of Greater sage-grouse. No records of sage grouse occurring within any of the allotments in the Anchustegui Allotment Complex exists. The southernmost allotment within the Anchustegui Complex, Little Smoky Allotment, has some potential habitat along the ridgeline between Salt and Little Smoky Creeks, but no observations of sage-grouse in this area have been made. The nearest sage-grouse observation to this allotment is within 5 miles to the east (on the Gooding Cattle Allotment), and the nearest known lek is located 7 air-miles to the south of this allotment on private land. Please also refer to the *Biological Assessment and Evaluation of the effects of Permitting Livestock Grazing on the Anchustegui Sheep Allotment Complex on Fish, Wildlife, and Plants* (USDA Forest Service 2008) for additional analysis of the proposed action on greater sage-grouse.

Sage-grouse are known to nest and winter in sagebrush habitats to the south of the Fairfield Ranger District on BLM and private lands. Sage-grouse breed to the south of the District on the

Camas Prairie and move up in elevation into areas on the District when conditions start to dry out during the summer. Most known sage-grouse leks occur over 15 air miles to the south of the Fairfield Ranger District on BLM lands.

The importance of sagebrush (Artemisia spp.) as habitat for sage-grouse is well documented (Patterson 1952, Connelly et al. 2000, etc.). Nesting success, early-brood rearing, and wintering are all tied to sagebrush. During late brood-rearing (July-October) sage-grouse can be found in grasslands, agricultural fields, and even along alpine ridges, but are generally within a mile of sagebrush habitat. Sage-grouse can be migratory or non-migratory (Connelly et al. 2000). Individuals on the Fairfield Ranger District are considered migratory and likely nest, raise young broods (ages 0-6 weeks old), and winter to the south of the District on BLM and private lands. Forb abundance is an important habitat factor for nesting and brood rearing habitat. Insect availability is also a key component for brood rearing habitat. Wet meadows and riparian areas provide critical brood rearing habitat due to the presence of forbs and insects (Wambolt et al. 2002, Connelly et al. 2000).

Declines in sage-grouse populations have been documented range-wide, as high as 45-80% since the 1950's (Braun 1998). Reasons for this decline are thought to be from cumulative factors, particularly the reduction of sagebrush habitat due to wildfire, changes in natural fire frequencies related to annual exotic grass invasions, agricultural and urban development, and mining. Other factors include habitat degradation from overgrazing, hydrological alterations affecting brood rearing habitat, fences, powerlines, wind turbines, etc. (Wambolt et al. 2002, Connelly et al. 2000, Braun 1998).

Local populations of sage-grouse within the vicinity of the Camas Prairie increased in numbers from 1996-2006 based on lek route data from IDFG and individual lek counts conducted by the Fairfield Ranger District Wildlife Biologist from 1999-2009. IDFG has conducted lek count routes in the area since the 1950's. A decline in population numbers occurred 2006-2007 and slightly lower numbers were counted in 2008 than 2007. Although numbers are still higher than counted in the early 1990's, IDFG and the North Magic Valley Sage-grouse Local Working Group has concerns over sage-grouse population declines in this area. Although not confirmed, West Nile virus outbreak in late summer of 2006 is thought to be the likely culprit of the population decline.

The population trend for sage-grouse across Idaho 1966 to 2003 can be found in Figure 8. This information comes from the US Geological Survey, Patuxent Wildlife Research Center, North American Breeding Bird Survey (Sauer et al 2004). As noted on the website, there are important deficiencies in data, likely due to low sample size.

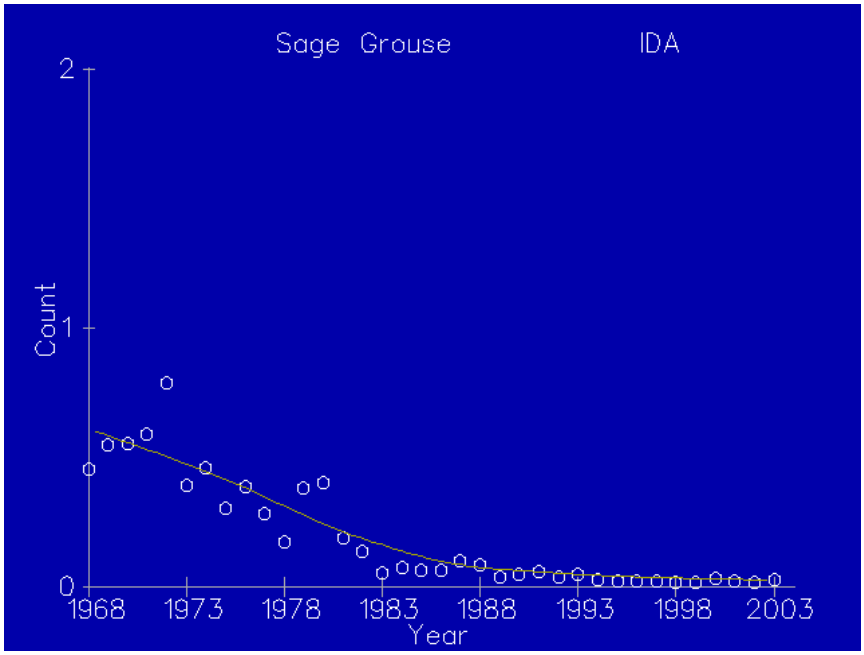

Figure 8: Idaho Population Trends for Sage-grouse

Threatened, Endangered, & Sensitive Species

All federally listed Threatened and Endangered species with potential habitat in the Anchustegui Allotment Complex analysis area are evaluated in this environmental assessment (USFWS biannual Forest-wide Species List, #14420-2009-SL-0358 dated June 1, 2009). Only Forest Service listed "sensitive" species with a high probability of occurring within the allotments are evaluated in this environmental assessment (see Table 3-5). Probability of occurrence is determined by confirmation of the presence of the species in the area and/or potential habitat. All Threatened and Endangered and Region 4 Forest Service Sensitive Species for the Fairfield Ranger District were analyzed in the *Biological Assessment and Evaluation of the effects of Permitting Livestock Grazing on the Anchustegui Sheep Allotment Complex on Fish, Wildlife, and Plants* (USDA Forest Service 2008).

Table 5: Probability of Occurrence of TES Wildlife Species in the Anchustegui S&G Grazing Allotment Complex

Species	Status	Probability of Occurrence
Lynx (*Lynx canadensis*)	USFWS Threatened	*Moderate – Potential Habitat*
Yellow-billed Cuckoo *(Coccyzus americanus)*	USFWS Candidate	*Low –Lack of Habitat*
Spotted Bat (*Euderma maculatum)*	USFS Sensitive	*Moderate – Potential Habitat*
Townsend's Big-eared Bat (*Corynorhinus townsendii)*	USFS Sensitive	*Moderate – Potential Habitat*
Wolverine *(Gulo gulo)*	USFS Sensitive	*High – Observed in area*
Fisher (*Martes pennanti)*	USFS Sensitive	*Low*

Species	Status	Probability of Occurrence
Northern Goshawk (*Accipter gentiles)*	USFS Sensitive	*High – Observed in area*
Boreal Owl (*Aegolius funereus)*	USFS Sensitive	*Moderate – Potential Habitat*
Flammulated Owl (*Otus flammeolus)*	USFS Sensitive	*High – Observed in area*
Northern Three-toed Woodpecker (*Picoides tridactylus)*	USFS Sensitive	*Moderate – Potential Habitat*
Columbia Spotted Frog (*Rana luteiventris)*	USFS Sensitive	*High – Observed in area*
White-headed Woodpecker *(Picoides albolarvatus)*	USFS Sensitive	*Low*
Mountain Quail *(Oreortyx pictus)*	USFS Sensitive	*Low*
Greater Sage-Grouse *(Centrocercus urophasianus)*	USFS Sensitive	*Low*
Pygmy Rabbit *(Brachylagus idahoensis)*	USFS Sensitive	*Low*
Peregrine Falcon *(Falco peregrinus)*	USFS Sensitive	*Moderate– Potential Habitat*
Bald Eagle (*Haliaeetus leucocephalus*)	USFS Sensitive	*Moderate– Potential Habitat*
Wood River Sculpin (*Cottus leiopomus*)	USFS Sensitive	*Low*
Gray Wolf (*Canis lupus*)	USFS Sensitive	*High- observed in area*
Big Horn Sheep *(Ovis Canadensis)*	USFS Sensitive	*Low*

Canada Lynx *(Lynx canadensis)*

The contiguous U.S. population of Canada lynx was listed as threatened by the USFWS) on March 24, 2000 (effective April 24, 2000). Subsequently, watershed level biological assessments on the effects of ongoing federal activities occurring on the Fairfield Ranger District to Canada lynx (including sheep grazing on the six allotments of the Anchustegui Allotment Complex) were completed in February 2003. This biological assessment determined that sheep grazing of the six Anchustegui Allotments, "may affect, but not likely adversely affect" lynx. As part of these analyses, baseline conditions for each Lynx Analysis Unit (LAU) were described and evaluated as to their ability to conserve lynx. The baseline matrices describing existing conditions of lynx habitat within the LAUs on the Fairfield Ranger District can be found in the *Biological Assessment of Effects of Ongoing Federal Actions on the Threatened Canada Lynx on the Fairfield Ranger District* (US Forest Service 2003).

The effects of reauthorizing sheep grazing on the six allotments of the Anchustegui Allotment Complex were evaluated using an effects matrix in the *Biological Assessment and Evaluation of the Effects of Permitting Livestock Grazing on the Anchustegui Sheep Allotment Grazing Complex on Fish, Wildlife, and Plant Species* (USDA Forest Service 2008). This assessment determined that continued sheep grazing on the Anchustegui Sheep Allotment Complex "may

affect, but not adversely affect" Canada lynx. This effects determination was concurred with by the USFWS in a letter dated May 2, 2008.

There have been no recent confirmed observations of lynx on the Fairfield Ranger District though suitable habitat is present (latest confirmed specimen from Fairfield Ranger District was in 1916, IDFG CDC Records). An unconfirmed observation of a lynx was reported in the Emma Creek drainage in 1990 (within the Anchustegui Allotment Complex). There was a confirmed sighting of lynx tracks in the Sawtooth National Recreation Area during the winter of 1997 near the Fishhook Creek drainage and also at Eureka Gulch, near Alturas Lake in 1998, approximately 20 and 3 miles north of the Anchustegui Allotment Complex, respectively. There is potential for lynx to occur within the analysis area.

Lynx are found in northern boreal forests and are closely associated with the snowshoe hare, their primary prey. Lynx also eat rodents, other rabbit species, and grouse. Denning areas and travel corridors are usually located in mature forest stands. Snowshoe hare prefer diverse, early successional forests with stands of conifers for cover and shrubby understories (Monthey 1986; Koehler and Aubry 1994). Lynx usually concentrate their foraging in areas where hare numbers are high, but they also require late successional forests with downed logs and windfalls to provide cover for denning sites, escape, and protection from severe weather (McCord and Cardoza 1982).

The Anchustegui Allotment Complex spans portions of six Lynx Analysis Units (LAU's) on the Fairfield Ranger District. The Anchustegui Sheep Allotment Complex contains 22,578 of predicted lynx foraging habitat and 7,716 of predicted lynx denning habitat based on GIS mapping by the Sawtooth National Forest (see Figure 9).

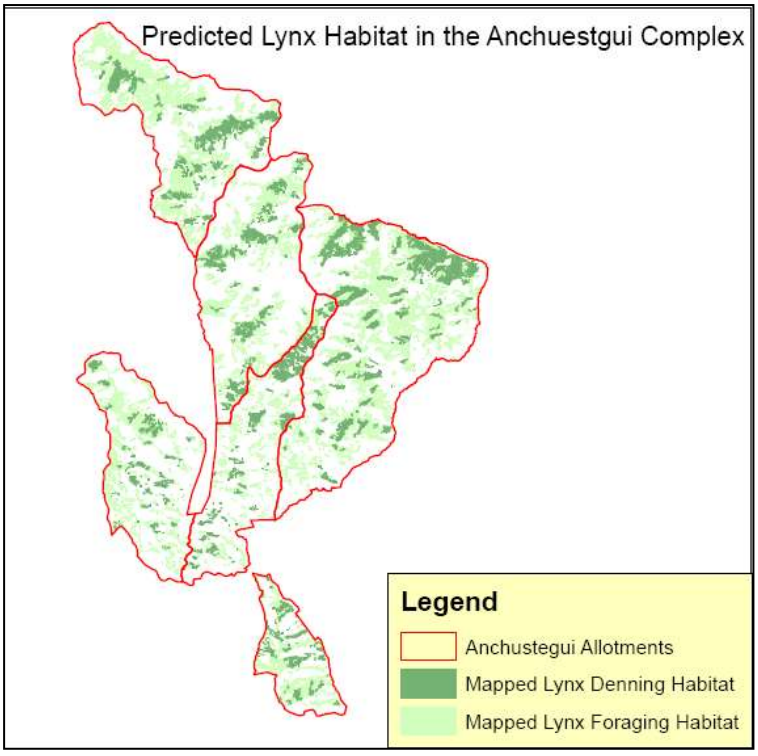

Figure 9: Predicted Lynx Habitat in the Anchustegui Sheep Grazing Allotment Complex

Prey species for lynx, including red squirrels, snowshoe hare, small mammals, ruffed grouse, and blue grouse, have been observed within the Anchustegui Sheep Allotment Complex. Historic grazing practices in the allotments likely affected habitat quality for all these species, except perhaps red squirrels. Current grazing practices in the Anchustegui Sheep Allotment Complex, however, are not thought to be limiting prey abundance (very large area only grazed by one band of sheep for relatively short time period).

Snowshoe hares rely heavily on woody browse for winter forage. Their habitat use is highly correlated with high horizontal cover from 1-3 meters above ground (Hodges 2000) and hare abundance has been shown to be positively correlated with density of understory vegetation (Livaitis et al. 1985). Both high elevation willow riparian areas and aspen forests provide winter forage and cover for hares, and livestock grazing has potential to affect this habitat. Livestock grazing in aspen forests has been shown to be negatively correlated with snowshoe hare abundance (Weatherill and Keith 1969). Much of the riparian areas within the Anchustegui Sheep Allotment Complex that are used by lynx prey species are in mid to high seral condition (good for snowshoe hares).

Current sheep grazing practices within the Anchustegui Allotment Complex meet objectives and standards outlined in the Lynx Conservation Assessment and Strategy and the Sawtooth National Forest Plan as related to Canada lynx habitat.

Yellow-billed Cuckoo *(Coccyzus americanus)*

Yellow-billed cuckoos are a candidate species for listing under the Endangered Species Act. It is unknown if yellow-billed cuckoos occur in the Anchustegui Sheep Allotment Complex or on the Fairfield Ranger District as a whole. Portions of the District contain potentially suitable habitat for the western subspecies of the yellow-billed cuckoo within riparian woodlands along streams and rivers. Very little of this habitat occurs within the Anchustegui Sheep Allotment Complex. The nearest known sighting of a yellow-billed cuckoo to the Fairfield Ranger District occurred at the headquarters of Idaho Fish and Game's Centennial Marsh Wildlife Management Area approximately 7 air miles to the south of the District in June 1996.

The yellow-billed cuckoo preferentially selects moderately dense thickets and deciduous trees near water. They may require large (100 to 200 acres), contiguous tracts of riparian habitat for breeding and typically nest 4 to 8 feet off of the ground. Nesting habitat has been described as dense lowland riparian with a dense sub-canopy or shrub layer (regenerating canopy trees, willows, or other riparian shrubs) within approximately 335 feet of water. Overstory in these habitats is usually comprised of closed-canopy stands of large or developing cottonwoods. Nesting habitats have been reported between 2,500 and 6,000 ft in Utah. (Parrish et al. 2002.) Very few distributional records of this species in the Rocky Mountain region are at elevations above 6,600 feet (U.S. FWS 2001). Diet of the yellow-billed cuckoo consists mainly of insects although they will feed on some fruit and an occasional frog or lizard.

It is unlikely that current sheep grazing on the Anchustegui Allotment Complex affects yellow-billed cuckoos or their habitat since neither individuals of the species nor adequate habitat likely occurs in the area.

Wolverine *(Gulo gulo)*

Wolverines are listed by Region 4 of the Forest Service as a "sensitive" species. A study of wolverines in central Idaho was conducted from 1992-1995. The Fairfield Ranger District was part of the study area for this project, and wolverine locations were detected in many locations on the District including within the Anchustegui Sheep Allotment Complex. Between 1992 and 1996, six male and one female, radio-collared wolverines were located multiple times within allotments in the Anchustegui Sheep Allotment Complex (see Figure 10). The female wolverine was located primarily in the headwaters of Johnson Creek in the summer of 1992.

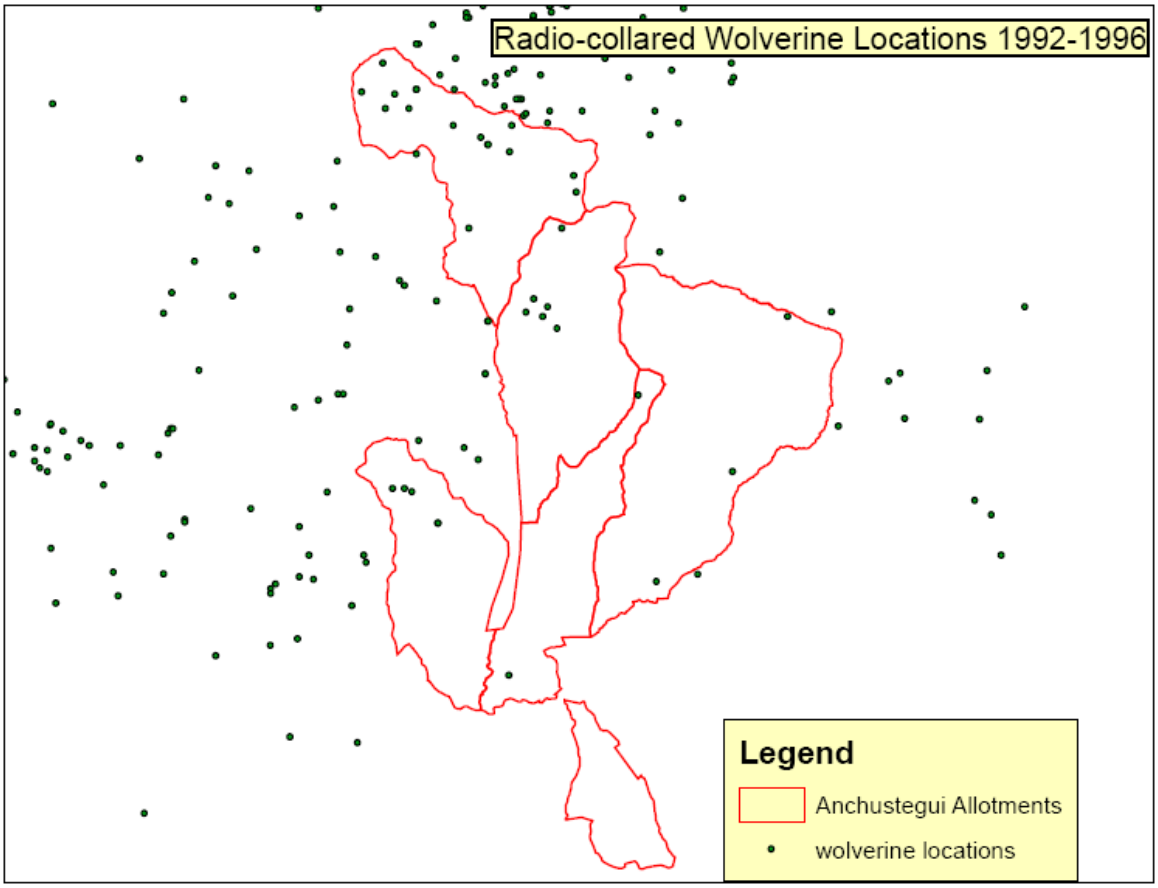

Figure 10: Radio-collared Wolverine Locations

In 2008, an active wolverine den was discovered approximately 5 air miles to the west of the Anchustegui Allotment Complex on the Idaho City Ranger District of the Boise National Forest. The Anchustegui Allotment Complex occurs within the foraging area for this wolverine pair.

The Johnson Creek Allotment of the Anchustegui Allotment Complex has the greatest proportion of predicted wolverine denning habitat of the six allotments. Predicted wolverine habitat is based on a GIS model of specific habitat attributes thought to represent potential wolverine denning habitat. Across the Anchustegui Sheep Allotment Complex there are 671 acres of predicted wolverine denning habitat (see Figure 11).

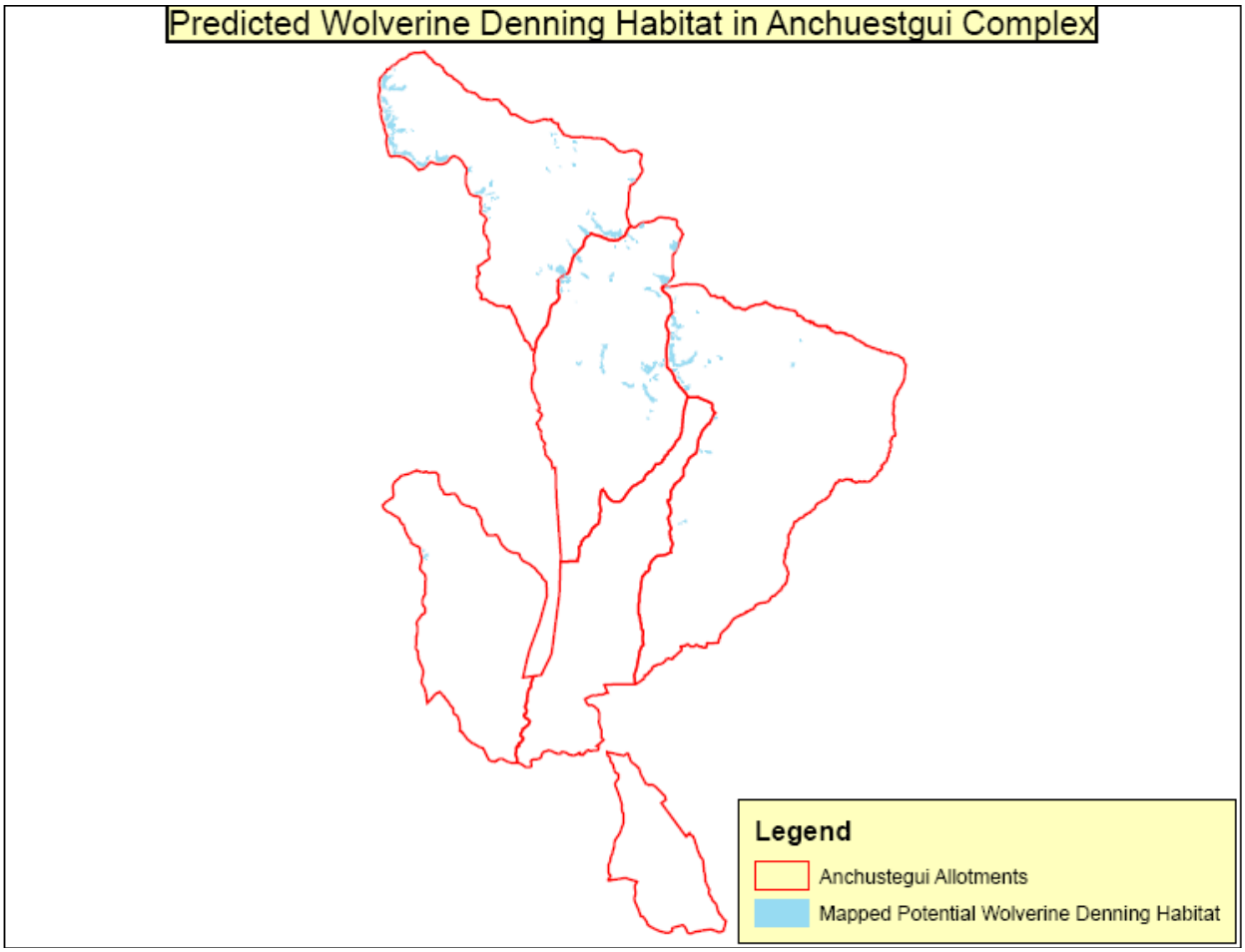

Figure 11: Predicted Wolverine Denning Habitat in the Anchustegui Allotment Complex

Wolverines are primarily scavengers and forage on carcasses of ungulates such as elk, deer, mountain goats, and bighorn sheep. They also may hunt for snowshoe hares, marmots, mice, voles, ground squirrels, and grouse but will also eat fruits, berries, and insects when other prey is unavailable (Hash 1987).

Home range sizes of wolverines are highly influenced by prey remains and other food sources. Individual animals generally have very large ranges and can cover large distances in very little time. In central Idaho home ranges average 384 square kilometers (148 square miles) for females and 1,582 square km (582 square miles) for males and may have overlapping ranges. They use several habitats and have been located in low-elevation, forested drainage bottoms to high-elevation, sparsely-timbered cirque basins. Two natal den sites were located in subalpine cirque areas on north-facing slopes suggesting that this type of habitat is critical to wolverines in central Idaho (Copeland 1996).

Female wolverines are very sensitive to disturbance during mid-February through May while they are searching for, establishing, and occupying their natal dens. Seeing people and their tracks near an existing den was enough disturbance to cause a female wolverine to move her kits to a different site. During this time females are lactating, and disturbance that leads to increased energy expenditure can be very detrimental. It is a critical time for females. They are trying to

maintain energy levels in order to properly nourish their kits during a time when food is scarce (Copeland 1996).

Current sheep grazing on the Anchustegui Allotment Complex does not likely affect wolverines or their habitat to any measurable degree. Habitat conditions for prey species of wolverines are potentially affected by livestock grazing by some unknown amount. It is unknown what effect that sheep grazing has truly had on wolverines or prey/forage species of wolverines over time. Current sheep grazing on the Anchustegui Sheep Allotment Complex does not increase the potential for direct mortality of individual wolverines since predator control of wolverines does not occur. Current grazing does not cause disturbance to wolverines during the critical denning period since sheep grazing on these allotments occurs after the denning period for wolverines.

Northern Goshawk *(Accipter gentilis)*

Goshawk nests have been located in several areas on the Fairfield Ranger District. An active goshawk territory occurs within the Anchustegui Sheep Allotment Complex. Inactive/alternate nests have been discovered in the Elk Creek Allotment and fledged juvenile goshawks were observed there in 2005. To date the active goshawk nest has not been located, but hunting adult goshawks were observed in the area in 2009.

Goshawk home ranges in mixed conifers forests have been described as 6,000 acres in size and comprised of a nest area (approximately 30 acres), a post fledging-family area or PFA (approximately 420 acres), and a foraging area (approximately 5,400 acres) (Reynolds et al. 1992). Nest areas generally have high tree canopy cover (50-60%) and a high density of large trees (average 20" dbh). The PFA provides cover and prey for the fledglings while developing their flying and hunting skills. These areas should have canopy cover of greater than 50% with well-developed understories. Goshawks prey on a wide variety of forest-dwelling birds and mammals such as grouse, woodpeckers, squirrels, and rabbits. Goshawks tend to use mature forests (and forest edges) for foraging, but also need other habitat elements which provide the necessary requirements for their prey such as snags, downed logs, and small openings, as well as herbaceous and shrubby understories (Reynolds et al. 1992).

Goshawks do not necessarily migrate long distances, but may move off their breeding territories during winter in order to find food. They tend to move to lower elevations with less snow cover during the winter, and return to breeding territories in March or April.

Current sheep grazing on the Anchustegui Sheep Allotment Complex does not likely impact goshawks or their habitat to any measureable degree. Habitat conditions for goshawk prey species are likely affected by livestock by some unknown amount. Current grazing practices have no effect on the potential for direct mortality of individual goshawks, but may potentially cause temporary disturbance to nesting goshawks if sheep are bedded down or herders set up a temporary camp next to an active goshawk nest.

Flammulated Owl *(Otus flammeolus)*

Observations of flammulated owls have been recorded in several areas within the Fairfield Ranger District including within the Little Smoky, Elk Creek, and Paradise/Calf Allotments of the Anchustegui Sheep Allotment Complex.

Flammulated owls are known to occur in mature ponderosa pine and mature Douglas-fir forests with an abundance of snags or live trees with cavities for nesting. Flammulated owls eat mainly invertebrates such as various insects, beetles, grasshoppers, and moths. Prey is more abundant and accessible in open forest stands with grass and shrub understories (Johnsgard 1988). This species is truly migratory and does not arrive on its breeding territories until May in Central Idaho.

Current sheep grazing on the Anchustegui Sheep Allotment Complex does not likely impact flammulated owls or their habitat. The effect current sheep grazing has upon habitat conditions for flammulated owl prey species (moths) is unknown. Current grazing does not affect the potential for direct mortality of individual flammulated owls or cause disturbance for them during the nesting season.

Spotted Frog *(Rana pretiosa)*

Spotted frogs have been located within two locations in the Anchustegui Sheep Allotment Complex, in a flood channel of Little Smoky Creek on the east edge of the Little Smoky Allotment and within the Elk Creek Allotment in Emma Creek. Only one other survey for spotted frogs has been done within the Anchustegui Sheep Allotment Complex; in Skeleton Creek where no frogs were observed. Potential habitat for this species occurs in many areas of the sheep allotments.

Spotted frogs are found in areas where permanent water is present such as marshes, ponds, or riparian areas. They may move considerable distances from water following the breeding season, often frequenting mixed conifer and subalpine forests, grasslands, and brushlands of sage and rabbitbrush if puddles, seeps or other water is available. Adult spotted frogs feed on invertebrates, generally within one-half meter of shore on dry days. During and after rains, they may move away from permanent water to feed in wet vegetation or ephemeral puddles (Licht 1986). Spotted frogs hibernate during winter and emerge when open water becomes available, generally during spring thaw.

Spotted frogs breed from late February to early July. A water temperature of 40 degrees Fahrenheit seems to be the critical temperature for emergence from hibernation (Morris and Tanner 1969), which may occur as early as the first part of April in the project area.

It is unknown if spotted frogs are being affected by current sheep grazing in the Anchustegui Sheep Allotment Complex. It is reasonable to assume current sheep grazing may have some effect to spotted frog habitat where sheep are watered or cross streams (streambank trampling, reduction of riparian vegetation, etc.). Due to habitat protection efforts for bull trout (designated routing and crossings), impacts to spotted frog habitat are likely minimized.

Gray Wolf *(Canis lupus)*

Gray wolves were officially delisted from the Endangered Species Act on May 4, 2009. They are now treated as a big game animal by the State of Idaho and as a "sensitive" species by Region 4 of the Forest Service.

Habitat for the wolf has been defined as any place with an adequate supply of ungulate prey and freedom from excessive human persecution (Fritts et al. 1993). Wolves prey mainly on ungulates year-round (Mech 1970). The basis of a wolf population is the pack, which Mech

defined as a cohesive group of two or more individual wolves traveling, hunting, and resting together throughout the year. Packs generally consist of two breeding adults, pups, yearlings, and/or extra adults. Wolf packs generally require large home ranges. Actual size of a pack's home range depends mainly on pack size, weather, and prey abundance and distribution. Territories of 80 square miles have been reported in Minnesota to over 660 square miles in Alberta (U.S. Fish and Wildlife Service 1994).

At least three known wolf packs have occurred on the Fairfield Ranger District in the past five years (Soldier Mountain Pack, Big Water Pack, and Moore's Flat Pack). In 2009, two successful dens were located on the District (Big Water Pack approximately 7 air miles west of the Skunk Creek Allotment, and an offshoot of the Soldier Mountain Pack that denned approximately 11 air miles to the southeast of the Little Smoky Allotment). Although no wolf dens have known to occur directly within the Anchustegui Sheep Allotment Complex, past confirmed breeding of the Soldier Mountain Pack occurred in 2000 and 2003-2006 within one mile of the Little Smoky Sheep Allotment (south-most allotment in Anchustegui Allotment Complex). The summertime rendezvous site for this pack occurred within a ¼ mile to the north of the Skillern Sheep Allotment (Anchustegui Allotment Complex) during these same years. The Anchustegui Allotment Complex is within the home range of the Soldier Mountain Pack, the Big Water Pack, and potentially other unknown pack territories.

Breeding of the Soldier Mountain Pack in 2001 and 2002 was not confirmed after the alpha male was illegally killed in November 2000. Similarly, breeding in 2007 and 2008 was not confirmed after the alpha female of the Soldier Mountain Pack was illegally killed in the spring of 2006. The pack was able to successfully rear the pups in 2006. As of 2008, only two members of this pack were radio-collared. One of these wolves was observed with other wolves in 2009 at an active den 11 air miles southeast of the Anchustegui Allotment Complex. In August 2009, five young wolves were found dead approximately 8 air miles to the east of the Little Smoky Allotment and 4 air miles to the west of the 2009 den. At this point, it is not confirmed if these were members of the Soldier Mountain Pack or exactly how they died. The dead wolves are still under investigation and laboratory testing is being done to determine the cause. At this point it is unknown if they were poisoned or died of some natural phenomenon.

From 2000-2006, the Soldier Mountain Pack wintered in the vicinity of the Big Smoky Elk Feed Site (approximately 1 mile northeast of the Little Smoky Sheep Allotment) primarily feeding on elk. Since that time, most elk that were fed in this area (approximately 400) have stopped feeding at the site and have likely begun to migrate to lower elevations to winter, apparently in response to wolf predation. In 2008, only around 75 elk were fed at the Big Smoky Elk Feed Site and approximately 40-50 elk at the Lightfoot Bar Elk Feed Site (one mile west of the Skunk Creek Sheep Allotment). Wolf predation at these elk feed sites was not observed in 2008, and only a few wolf tracks were noticed (Skinner pers. obs. 2008).

Wolf sign and elk/deer kills have been observed during wildlife surveys within the Elk Creek and Skillern Sheep Allotments (Anchustegui Complex) during the winter and summer months (2001-2006). Elk killed by wolves and mountain lions were commonly found along Little Smoky Creek immediately east of the Little Smoky Sheep Allotment during the winters of these years.

The Soldier Mountain Pack has been involved in some livestock depredation, but not to the degree of other wolf packs that have occurred on the Fairfield Ranger District outside of the

Anchustegui Sheep Allotment Complex. On June 30, 2009, wolves (likely from the Soldier Mountain Pack) attacked a buck sheep in Lick Creek on an adjoining allotment less than a mile to the east of the Little Smoky Allotment. Herders averted the kill. In response, USDA Wildlife Services killed a wolf on the District north of Fairfield (likely a member of the Soldier Mountain Pack) on July 9, 2009. In 2006, a sheep was injured by a wolf in the Paradise/Calf Allotment (Anchustegui Complex), but it was unknown if the wolf was from the Soldier Mountain Pack or not. The Pack has been involved in killing sheep on an allotment to the north of and outside the Fairfield Ranger District and did kill one calf in a cattle allotment to the east of the Anchustegui Complex in 2004. Two wolves from the Soldier Mountain Pack were killed by Wildlife Services in 2002 also in response to sheep depredation.

The other two packs that formed on the Fairfield Ranger District were essentially removed by Wildlife Services in response to sheep depredations on allotments outside of the Anchustegui Sheep Allotment Complex (Big Water Pack in 2006 and Moore's Flat in 2007). A new pack denned in Big Water Gulch (likely with surviving members from previous pack) in 2009. This Pack was not involved in any known depredation activities in the summer of 2009 although may have been responsible for sheep that were confirmed to be killed by wolves over 6 air miles to the south of the known den site. In 2009, sheep allotments surrounding the Big Water den site were not active due to administrative rest for recovery from the 2008 Barker Wildfire. No activity from any surviving members of the Moore's Flat Pack is known.

Current sheep grazing within the six allotments of the Anchustegui Allotment Complex indirectly affects wolves through predator control activities. Over the past decade, two wolf packs (Big Water and Moore's Flat Packs) and several individuals from the Soldier Mountain pack have been killed by Wildlife Services in response to livestock depredation. Thus far, lethal predator control does not appear to be stopping wolf depredation on livestock or causing extirpation of wolves off the District. Individual wolves (and even entire packs) have been killed, but confirmed reproduction of wolves has continued thus far. While predator control activities are outside the jurisdiction of the Forest Service, sheep grazing on Sawtooth National Forest land are under the jurisdiction of the Fairfield Ranger District. The presence of livestock in the Anchustegui Allotments leads to likely future lethal control of wolves by Wildlife Services.

Under the delisting process for wolves, the State of Idaho is required to maintain a minimum of 10 breeding pairs and 100 wolves within the recovery area of the state below Interstate 90. Consistent with the delisting rule, the state's goal is to ensure the long-term viability of the gray wolf population in the State. The metric for the term of the Idaho Wolf Population Management Plan 2008-2012 is to sustain the wolf population at 2005 to 2007 levels (518-732 wolves).

Sheep grazing on the Anchustegui Allotments may also negatively affect wolves by potentially limiting prey species populations. Elk and mule deer, the primary prey of wolves, have some dietary overlap with domestic sheep. Sheep grazing reduces some forage/browse for these species, and therefore may have some un-measurable effect to deer and elk. In the Anchustegui Allotments, however, it does not appear that lack of forage is limiting elk or deer (see the Big Game section in this EA).

At this point, current sheep grazing on the Anchustegui Allotments does not appear that it would likely lead to a trend toward future ESA listing of wolves.

Wildlife Habitat Environmental Consequences (Effects)

Big Game-Effects

Direct & Indirect Effects of Alternative 1 (No Grazing) to Elk and Deer

Discontinuing sheep grazing on the Anchustegui Sheep Allotment Complex would likely improve habitat for elk and deer by an unquantifiable and likely insignificant degree. Under the no grazing alternative, forage for elk and deer would likely increase by an unknown amount.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Elk and Deer

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would not change current habitat conditions for elk and deer. Forage for elk and deer would continue to be reduced annually by an unquantified and likely insignificant amount. Standards and guidelines from the Sawtooth Forest Plan would continue to be met for these allotments.

Cumulative Effects of the Proposed Action to Elk and Deer

Past and current livestock grazing, past mining, past timber harvest, past road building, invasive weeds, fire suppression, recreation, firewood gathering (disturbance), and development of seasonal cabins on private land in-holdings have affected elk and deer habitat on the Fairfield Ranger District. These, along with current winter recreation, have also affected elk winter range. Past sheep grazing and driveways and mining of south-facing slopes have affected vegetation capable of supporting wintering elk in some locations on the District. Invasive weeds, primarily leafy spurge, have further impacted potential elk winter ranges in certain areas on the South Fork of the Boise River.

In 2008, a large wildfire occurred in the northwest portion of the Fairfield Ranger District, west of the Anchustegui Allotment Complex. The South Barker Wildfire Use Fire burned approximately 37,000 acres. Effects to deer and elk habitat from the fire include a reduction of hiding and thermal cover with a corresponding increase in forage and browse. In addition, the fire burned a few hundred acres of elk winter range along the South Fork of the Boise River between Featherville and Shake Creek Guard Station, temporarily reducing forage for the 2008-2009 winter.

A foreseeable future project within the vicinity of the Anchustegui Allotment Complex is the Upper South Fork Boise River Vegetation Management Project. Details of the project and effects to elk and deer habitat can be found in the Environmental Assessment and Wildlife Specialist Report for that project (Forest Service 2009) available at the Fairfield Ranger Station. Approximately 200 acres of fuels reduction mechanical treatments around private land boundaries and up to 800 acres of prescribed fire to increase aspen regeneration are proposed. Other ongoing and proposed future fuels reduction projects are planned on the District (current Soldier Mountain Fuels Reduction and future Liberal-Willow Fuels Reduction Projects). These projects are considered in the context of cumulative effects to deer and elk habitat across the Fairfield Ranger District.

Continuing sheep grazing on the Anchustegui Allotment complex as proposed would maintain cumulative effects on the Fairfield Ranger District to elk and mule deer at current levels.

Discontinuing sheep grazing on the Anchustegui allotments would not reduce cumulative effects to any measurable degree.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Mountain Goats

Discontinuing sheep grazing on the Anchustegui Allotment Complex would likely improve habitat for mountain goats an unquantifiable and likely insignificant degree. Under the no grazing alternative, forage for mountain goats would likely increase by an unknown amount in those areas where sheep grazing overlaps with mountain goat habitat.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Mountain Goats

Continuing sheep grazing on the Anchustegui Allotment Complex as proposed would not change current habitat conditions for mountain goats. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Cumulative Effects of the Proposed Action to Mountain Goats

Past and current domestic sheep grazing and past mining and road building has affected mountain goat habitat on the Fairfield Ranger District. Recreational activities within mountain goat habitat (particularly wintertime recreation such as helicopter skiing and snowmobiling) have likely caused some disturbance effects to mountain goats. Past hunting of mountain goats by miners and early settlers may have impacted mountain goat numbers. Current controlled hunting of mountain goats as allowed by IDFG does not likely impact population numbers although sport hunting of mountain goats is considered to be "additive." The 2008 South Barker Wildfire did not burn mountain goat habitat, and no fuels reduction projects are planned to occur within the mountain goat habitat.

Continuing domestic sheep grazing on the Anchustegui Allotment complex as proposed would maintain cumulative effects on the Fairfield Ranger District to mountain goats at current levels. Discontinuing sheep grazing on the Anchustegui Allotments would not likely reduce cumulative effects to this species to any measurable degree.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Bighorn Sheep

Discontinuing domestic sheep grazing on the Anchustegui Allotment Complex would not likely alter potential bighorn sheep habitat in the area to any measurable degree. Discontinuing domestic sheep grazing, however, would increase the potential for IDFG to conduct future transplants of bighorn sheep onto the allotments. IDFG has no known plans to reintroduce bighorn sheep into the area, but this may be a result of existing domestic sheep grazing and potential disease transmission issues. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Bighorn Sheep

Since no existing bighorn sheep populations exist nor are there any plans to reintroduce bighorn sheep onto the Anchustegui Allotment Complex, continued domestic sheep grazing has no direct effect on bighorn sheep. However, continuing domestic sheep grazing reduces the likelihood of IDFG planning a bighorn sheep transplant onto the Fairfield Ranger District. Under this Alternative, Forest Plan direction would be met.

Cumulative Effects of the Proposed Action to Bighorn Sheep

It is unknown if bighorn sheep inhabited the Fairfield Ranger District historically. Based on historic records of the widespread nature of bighorn sheep throughout Idaho, however, it is reasonable to assume that bighorn sheep may have occurred in this area in the past. Throughout Idaho, bighorn sheep numbers were decimated due to disease transmitted from domestic sheep and from commercial hunting for mining settlements. Continuing domestic sheep grazing on the Anchustegui Allotment Complex reduces the likelihood of bighorn reintroduction into the area, but does not add to cumulative effects to the species across the Fairfield Ranger District since known population of bighorn sheep do not exist.

MIS Species-Effects

Direct & Indirect Effects of Alternative 1 (No Grazing) to Pileated Woodpeckers

Discontinuing sheep grazing on the Anchustegui Allotment Complex would not likely improve habitat for pileated woodpeckers over current conditions. While potential effects from sheep grazing upon to aspen regeneration would be reduced, no over utilization of aspen shoots by sheep is currently known. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Pileated Woodpeckers

Continuing sheep grazing on the Anchustegui Allotment Complex as proposed would not likely change current habitat conditions for pileated woodpeckers on the allotments. In general, pileated woodpeckers would continue to be unaffected by domestic sheep grazing, excepting potential, minimal localized effects to aspen regeneration. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Cumulative Effects of the Proposed Action to Pileated Woodpeckers

Past timber harvest, road building, fire suppression, mining, livestock grazing, and firewood gathering have affected pileated woodpecker habitat on the Fairfield Ranger District. Timber harvest has reduced large trees available to pileated woodpeckers in many areas on the District, such as clear cuts along the Salt-Bounds Road and in the South Fork of Soldier Creek in the 1960's and 70's. More recently, timber sales including the North Fork Lime Creek and South Fork Boise River Salvage Timber Sales were implemented in the early 1990's which focused on salvaging dead and dying trees, primarily larger diameter trees, from ridgetops. Other than a very small 20 acre timber sale of lodgepole pine in the Skunk Creek Allotment, no timber sales have occurred within the Anchustegui Allotment Complex in the past decade.

A foreseeable future project within the vicinity of the Anchustegui Allotment Complex is the Upper South Fork Boise River Vegetation Management Project. Details of the project and effects to pileated woodpecker habitat can be found in the Environmental Assessment and Wildlife Specialist Report for that project (Forest Service 2009) available at the Fairfield Ranger Station. Approximately 200 acres of fuels reduction mechanical treatments around private land boundaries and up to 800 acres of prescribed fire to increase aspen regeneration are proposed. Other ongoing and proposed future fuels reduction projects are planned on the District (current

Soldier Mountain Fuels Reduction and future Liberal-Willow Fuels Reduction Projects). These projects are considered in the context of cumulative effects to pileated woodpecker habitat across the Fairfield Ranger District.

Fire suppression over the past 100 years is thought to have contributed to conifer encroachment of aspen stands on the Fairfield Ranger District. Fire suppression, in combination with grazing, has had negative effects on aspen regeneration. Old forest habitat (large trees of open spacing) has also been reduced by fire suppression in combination with past logging. Due to the suppression of fire on the Fairfield Ranger District, many ponderosa pine and Douglas-fir stands are heavily stocked with younger trees. Older, large trees have been selectively logged in the past and many existing large trees are being choked out by the young trees due to competition for sunlight, water, and nutrients. Risk of stand-replacing fire has also resulted which could burn down large, old trees that might otherwise be able to withstand frequent ground fires. All of these factors have affected pileated woodpecker habitat on the Fairfield Ranger District.

Conversely, a 2008 wildfire use fire (South Barker WFU) was allowed to burn across 37,000 acres of the Fairfield Ranger District to the west of the Anchustegui Sheep Allotment Complex. This fire burned approximately 1,600 acres of potential pileated woodpecker habitat to the degree that the stands are no longer potential nesting habitat. The fire also burned aspen stands which will provide future potential nesting habitat from increased aspen regeneration. The fire also increased the acres of foraging habitat for pileated woodpeckers.

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain cumulative effects to pileated woodpeckers from domestic sheep grazing on the Fairfield Ranger District at current levels. Discontinuing sheep grazing on the Anchustegui allotments would not likely reduce cumulative effects to this species to any measurable degree.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Greater Sage-grouse

Discontinuing sheep grazing on the Anchustegui Sheep Allotment Complex would not improve habitat for sage-grouse over current conditions since the allotments are outside the known range of sage-grouse and very little potential sage-grouse habitat occurs within the allotments. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Greater Sage-grouse

Continuation of sheep grazing on the Anchustegui Sheep Allotment Complex would not likely affect greater sage-grouse since the allotments are outside the known range of sage-grouse and very little potential sage-grouse habitat occurs within the allotments. A potential indirect effect of reauthorizing sheep grazing on these allotments is that the same sheep use BLM and private lands to the south of the Fairfield Ranger District which are important sage-grouse habitat. By allowing grazing on the Fairfield Ranger District, it perhaps keeps the operation viable and may be in part responsible for keeping this band using private and BLM lands on areas outside the control of the Fairfield Ranger District. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Cumulative Effects of the Proposed Action to Greater Sage-grouse

Historic sheep grazing on the Fairfield Ranger District is thought to have degraded upland and riparian habitats due to sheer numbers of sheep. Erosion, topsoil loss, and vegetation species composition changes all resulted, likely affecting late brood-rearing habitat for sage-grouse on the District. Current cattle and sheep grazing on the Fairfield Ranger District within habitat for sage-grouse may affect sage-grouse habitat to some degree, particularly in riparian areas. Livestock grazing can reduce stubble height of grasses along streams, seeps, and wet meadows which may reduce hiding cover for grouse, but may also stimulate forb production, an important food source to sage-grouse broods at the time period they would be using habitat on the Fairfield Ranger District.

Over their entire range, greater sage-grouse have been negatively affected by large scale wildfire and conversion of sagebrush areas to predominately cheat grass. This invasive, annual grass burns more readily than sagebrush and native bunchgrasses and often alters the natural fire frequency. Sagebrush may not be able to reestablish in areas converted to cheat grass. This primarily affects lower elevation sage-grouse habitats where the birds nest and winter. Since sage-grouse rely so heavily on sagebrush at these time periods, conversion to cheat grass in these areas has major effects. Wintering and nesting habitat is not known to occur on the Fairfield Ranger District. Cheat grass is present in some locations on the District, but has not affected fire frequencies like it has in lower elevations, likely due to higher precipitation levels.

Continuation of sheep grazing on the Anchustegui Sheep Allotment Complex would not add to cumulative effects to greater sage-grouse since the allotments are outside the known range of sage-grouse.

Threatened, Endangered, & Sensitive Species-Effects

Direct & Indirect Effects of Alternative 1 (No Grazing) to Canada Lynx

Discontinuing sheep grazing on the Anchustegui Sheep Allotment Complex would not likely improve habitat for lynx over current conditions. While potential effects from sheep grazing upon habitat for lynx prey species (snowshoe hares, blue grouse, etc.) would be reduced, current sheep grazing is not thought to be limiting prey abundance. Any improvement in habitat to prey species would likely be unquantifiable and insignificant. Direction from the Forest Plan and the Lynx Conservation Strategy would be met under this Alternative.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Canada Lynx

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain current conditions for lynx on the allotments. Habitat (cover and forage) for prey species such as snowshoe hares and grouse would continue to be impacted to some degree. Current sheep grazing practices within the Anchustegui Sheep Allotment Complex would continue to meet objectives and standards outlined in the Lynx Conservation Assessment and Strategy and the Forest Plan as related to Canada lynx habitat.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Yellow-billed Cuckoo

Discontinuing sheep grazing on the Anchustegui Sheep Allotment Complex would not likely affect yellow-billed cuckoos or their habitat since neither individuals of the species nor adequate habitat likely occurs in the area. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Yellow-billed Cuckoo

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain current conditions for yellow-billed cuckoos on the allotments. Current sheep grazing on the Anchustegui Allotment Complex does not affect yellow-billed cuckoos or their habitat since neither individuals of the species nor adequate habitat likely occur in the area. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Wolverine

Discontinuing sheep grazing on the Anchustegui Sheep Allotment Complex would not likely affect wolverines to any measureable degree. Habitat conditions for prey species of wolverines would likely improve by some unknown amount. No change in potential for direct mortality to wolverines or disturbance during breeding would result. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Wolverine

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain current conditions for wolverines on the allotments. Habitat (cover and forage) for prey species such as snowshoe hares, small mammals, and large ungulates (deer and elk) would continue to be impacted to some degree. No change in potential for direct mortality to wolverines or disturbance during breeding would result since current sheep grazing does not affect either. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Northern Goshawk

Discontinuing sheep grazing on the Anchustegui Sheep Allotment Complex would not likely change conditions for goshawks in the Anchustegui Sheep Allotment Complex to any measureable degree. While potential effects from sheep grazing upon habitat for goshawk prey species would be reduced, current sheep grazing is not thought to be limiting prey abundance. Any improvement in habitat to prey species would likely be unquantifiable and insignificant. There would continue to be no potential for direct mortality of individual goshawks. The potential for temporary disturbance to nesting goshawks (if sheep are bedded down or herders set up a temporary camp next to an active goshawk nest) would be reduced however. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Northern Goshawk

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain current conditions for goshawks on the allotments. Habitat (cover and forage) for prey species would continue to be impacted to some degree. There would be no change in potential

for direct mortality of individual goshawks or temporary disturbance to nesting goshawks. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Flammulated Owl

Discontinuing sheep grazing on the Anchustegui Allotment Complex would not likely change current conditions for flammulated owls from current. Unknown, but potential, effects from sheep grazing upon habitat for flammulated owl prey species (moths and other invertebrates) may be reduced. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Flammulated Owl

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain current conditions for flammulated owls on the allotments. Unknown, but potential, effects to prey species would remain. Sheep grazing would continue to unaffect potential for direct mortality or disturbance to nesting flammulated owls. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Spotted Frog

Discontinuing sheep grazing on the Anchustegui Allotment Complex would likely, over time, improve habitat conditions for spotted frogs over current conditions. A reduction of impacts to spotted frog habitat (reduced streambank trampling, incease of riparian vegetation, etc.) would be foreseeable. The actual effect current grazing has on spotted frogs is unknown, however. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect Effects of Alternative 2 (Proposed Action) to Spotted Frog

Continuing sheep grazing on the Anchustegui Allotment Complex as proposed would maintain current conditions for spotted frogs on the allotments. Current sheep grazing likely has some effect to spotted frog habitat where sheep are watered or cross streams (streambank trampling, reduction of riparian vegetation, etc.). These effects would continue, but would also continue to be minimized due to habitat protection efforts for bull trout (designated crossings, routes, etc.). If localized effects to spotted frog habitat are documented, adaptive management strategies may be employed to reduce effects. Standards and guidelines from the Forest Plan would continue to be met for these allotments.

Direct & Indirect Effects of Alternative 1 (No Grazing) to Gray Wolf

Discontinuing sheep grazing on the Anchustegui Allotment Complex would likely improve conditions for wolves over current conditions. Without sheep grazing on the allotments, there is less need for and likelihood of predator control actions occurring. However, since adjacent allotments would still have domestic livestock grazing, the potential for lethal control actions by Wildlife Services would remain.

Potential effects from sheep grazing upon habitat for wolf prey species (deer and elk) would likely be reduced. Under the no grazing alternative, forage for elk and deer would likely increase by an unknown amount. This increase in forage is unquantifiable and likely insignificant, and the degree to which would increase prey availability to wolves is unknown. Currently, it is unlikely that forage is the limiting factor for deer and elk populations in the allotments. In

addition, prey availability is not likely the current limiting population factor for wolves since wolf populations appear to be expanding. Under this Alternative, Forest Plan direction would be met.

Direct/Indirect Effects of Alternative 2 (Proposed Action) to Gray Wolf

Continuing sheep grazing on the Anchustegui Allotment Complex as proposed would maintain current conditions for wolves on the allotments. Due to dietary overlap with domestic sheep, forage for prey species (deer and elk) would continue to be reduced to some degree. The potential for lethal predator control activities by Wildlife Services would remain at current levels. Based on continued expansion of wolf populations on the Sawtooth National Forest and across Idaho regardless of livestock and predator control issues, it is unlikely that continued domestic sheep grazing on the Anchustegui Allotments would lead to a trend toward relisting of wolves under the Endangered Species Act. Under this Alternative, Forest Plan direction would be met.

Cumulative Effects of the Proposed Action to Threatened, Endangered, and Sensitive Species

Past timber harvest, road building, fire suppression, mining, livestock grazing, and firewood gathering have affected threatened, endangered and sensitive species habitat on the Fairfield Ranger District. Historic sheep grazing on the District degraded upland and riparian habitats due to sheer numbers of sheep. Erosion, topsoil loss, and vegetative composition changes resulted from historic grazing affecting habitat for spotted frogs and for prey species of Canada lynx, wolverines, northern goshawks, flammulated owls, and gray wolves.

Timber harvest has reduced large trees and habitat available to Canada lynx, goshawks, and flammulated owls in many areas on the District such as clear cuts along the Salt-Bounds Road and in the South Fork of Soldier Creek in the 1960's and 70's. More recently, timber sales including the North Fork Lime Creek and South Fork Boise River Salvage Timber Sales were implemented in the early 1990's which focused on salvaging dead and dying trees, primarily larger diameter trees, from ridgetops. Other than a very small 20 acre timber sale of lodgepole pine in the Skunk Creek Allotment, no timber sales have occurred within the Anchustegui Sheep Allotment Complex in the past decade.

A foreseeable future project within the vicinity of the Anchustegui Allotment Complex is the Upper South Fork Boise River Vegetation Management Project. Details of the project and effects to threatened, endangered and sensitive species habitat can be found in the Environmental Assessment, Wildlife Specialist Report, and Biological Assessment and Evaluation for that project (US Forest Service 2009) available at the Fairfield Ranger Station. Approximately 200 acres of fuels reduction mechanical treatments around private land boundaries and up to 800 acres of prescribed fire to increase aspen regeneration are proposed. Other ongoing and proposed future fuels reduction projects are planned on the District (current Soldier Mountain Fuels Reduction and future Liberal-Willow Fuels Reduction Projects). These projects are considered in the context of cumulative effects to threatened, endangered and sensitive species habitat across the Fairfield Ranger District.

Fire suppression over the past 100 years is thought to have contributed to conifer encroachment of aspen stands on the Fairfield Ranger District. Fire suppression, in combination with grazing,

has had negative effects on aspen regeneration. Old forest habitat (large trees of open spacing) has also been reduced by fire suppression in combination with past logging. Due to the suppression of fire on the Fairfield Ranger District, many ponderosa pine and Douglas-fir stands are heavily stocked with younger trees. Older, large trees have been selectively logged in the past and many existing large trees are being choked out by the young trees due to competition for sunlight, water, and nutrients. Risk of stand-replacing fire has also resulted which could burn down large, old trees that might otherwise be able to withstand frequent ground fires. All of these factors have affected threatened, endangered and sensitive species habitat on the Fairfield Ranger District.

Conversely, a 2008 wildfire use fire (South Barker WFU) was allowed to burn across 37,000 acres of the Fairfield Ranger District to the west of the Anchustegui Sheep Allotment Complex. This fire burned potential habitat for Canada lynx, yellow-billed cuckoo, wolverines, northern goshawks, flammulated owls, spotted frogs, and gray wolves. The fire did, however, burn aspen stands which through increased regeneration will provide future habitat.

Continuing sheep grazing on the Anchustegui Sheep Allotment Complex as proposed would maintain cumulative effects to Canada lynx, yellow-billed cuckoo, wolverines, northern goshawks, flammulated owls, spotted frogs, and gray wolves from domestic sheep grazing on the Fairfield Ranger District at current levels. Discontinuing sheep grazing on the Anchustegui allotments would not likely reduce cumulative effects to this species to any measurable degree.

Key Issue – Fish and Aquatic Habitat _____

Affected Environment

The boundaries of the Anchustegui Allotment Complex include portions of the Little Smoky Creek, Willow-Boardman, Upper South Fork Boise, and Big Smoky Creek watersheds. Within the Little Smoky watershed, the complex includes the Little Smoky allotment in the Lick-Five Points subwatershed. Within the Willow-Boardman watershed, the complex includes the Little Smoky Allotment in the Miller-Salt-Bowns subwatershed and the Skunk Creek Allotment in the Housman-Beaver and Skeleton subwatersheds. Within the Upper South Fork Boise watershed, the complex includes the Skunk Creek Allotment in the Skunk-Elk subwatershed, the Elk Creek Allotment in the Skunk-Elk and Emma-Axolotl subwatershed, and the Johnson Creek Allotment in the Emma-Axolotl and Johnson Creek subwatersheds. Within the Big Smoky watershed, the complex includes the Paradise/Calf Allotment in the Paradise and Skillern-Calf subwatersheds and the Skillern Allotment in the Skillern-Calf, North Fork Big Smoky, Narrow-Bluff, and West Fork Big Smoky subwatersheds.

Named perennial streams within the Anchustegui Complex and the allotments through which they flow are shown in the table below.

Table 6: Named Perennial Streams within the Anchustegui Grazing Allotment Complex

Stream Name	Subwatershed	Allotment
Wash Canyon Creek	Lick-Five Points	Little Smoky
Five Points Creek	Lick-Five Points	Little Smoky

Stream Name	Subwatershed	Allotment
Little Smoky Creek	Lick-Five Points	Little Smoky
Salt Creek	Miller-Salt-Bowns	Little Smoky, Paradise/Calf
Big Smoky Creek	Skillern-Calf	Paradise/Calf, Skillern
South Fork Boise River	Skunk-Elk	Paradise/Calf, Skunk Creek, Elk Creek
Fletcher Creek	Skunk-Elk	Skunk Creek
Conant Creek	Housman-Beaver	Skunk Creek
Little Skeleton Creek	Skeleton	Skunk Creek
Skunk Creek	Skunk-Elk	Skunk Creek
O.P. Creek	Skunk-Elk	Skunk Creek
Elk Creek	Skunk-Elk	Elk Creek
Headquarters Camp Creek	Skunk-Elk	Elk Creek
Emma Creek	Emma-Axolotl	Elk Creek
South Fork Boise River	Emma-Axolotl	Elk Creek/Johnson Creek
Johnson Creek	Johnson	Johnson Creek
Vienna Creek	Johnson	Johnson Creek
Paradise Creek	Paradise	Paradise/Calf
Calf Creek	Skillern-Calf	Paradise/Calf
Poison Creek	Skillern-Calf	Skillern
Barlow Creek	Skillern-Calf	Skillern
Poison Creek	Skillern-Calf	Skillern
Skillern Creek	Skillern-Calf	Skillern
North Fork Big Smoky Ck	North Fork Big Smoky	Skillern
Snowslide Creek	North Fork Big Smoky	Skillern
Pinyon Gulch Creek	North Fork Big Smoky	Skillern
Little Pinyon G Creek	North Fork Big Smoky	Skillern
Big Smoky Creek	Narrow-Bluff	Skillern
Narrow Creek	Narrow-Bluff	Skillern
West Fork Big Smoky Ck	West Fork Big Smoky	Skillern
Helen Creek	West Fork Big Smoky	Skillern

General Aquatic Habitat:

Instream and riparian habitat conditions in some of the streams within the proposed action area have been formally sampled since 1994, including 26 sites where R1/R4 Fish Habitat Inventory Surveys were performed in 1997-2002, eight sites where a Sawtooth National Forest-specific protocol was used to establish permanent monitoring sites in 2001 or 2002, 14 sites (in 1994 or 1995) where crews from the Forest Service's (then) Intermountain Research Station recorded habitat data, and 35 sites where the Idaho Department of Environmental Quality (IDEQ) has collected habitat and/or macroinvertebrate data since 1995. Thermographs have also been deployed in several of the streams by District staff in the Anchustegui allotment since 1999. These data (with the exception of some of the IDEQ data) are incorporated into the baseline portions of the Matrices of Pathways and Indicators in Appendix 2 of the Biological Assessment/Biological Evaluation for this project. In an analysis of water quality in the South Fork Boise River drainage by the IDEQ (Beattie 2009), the streams of the allotment complex were determined to not be water quality limited and to fully support its designated beneficial uses.

There are three baseline categories for the Matrix of Pathways and Indicators used in ESA consultation and Forest Plan compliance: Functioning Appropriately, Functioning At Risk, and Functioning At Unacceptable Risk. The "at risk" category means that a particular baseline indicator (or an average or summation of baseline indicators) has some degraded aspects, but is still functional relative to the desired conditions.

On average, instream habitat within the allotment is in an "at risk" condition, but several of the subwatersheds are primarily properly functioning. While many streams have some or many habitat indicators that are properly functioning (especially those in the northern portion of the complex), other streams, especially those paralleled or frequently crossed by roads, have habitat indicators that are degraded to a greater or lesser degree from that considered optimal. Those instream habitat indicators within the allotment that are often divergent from a properly functioning condition are fine sediment, water temperature, width to depth ratio, pool quality, and peak/base flow volume. Because the allotment complex is located within the Idaho Batholith, which is a highly erodible, geologic and hydrologic processes and intense historic use of the watershed for mining and grazing has had lingering impacts. Consequently, many instream habitat indicators in the Anchustegui Allotment Complex watersheds may be less than ideal. That several of the subwatersheds in the allotment complex are in proximity to Fairfield or the primary travel routes through the District combined with a moderate-to-high road density in the southernmost of the allotments makes it likely that substantial recreational use is distributed in riparian areas. Although sheep grazing in the watershed is much more closely managed and has substantially less influence on aquatic and riparian conditions than historically, localized detrimental impacts on aquatic and riparian habitat due to sheep grazing still occur.

General Fish Discussion:

Regarding specific stream reaches within or bounding the allotments, Little Smoky, Five Points, Wash Canyon, Salt, OP, Skunk, Elk, Emma, Johnson, Vienna, Paradise, Calf, Barlow, Skillern, North Fork Big Smoky, Snowslide, West Fork Big Smoky, and a small portion of Big Smoky Creeks have each been sampled by electrofishing at least once within the last decade or so (Kenney 2002, Kenney unpublished data). Wild redband trout were sampled in each of these streams, while sculpin were also present at many sites; redband trout appear to be ubiquitous in the upper South Fork Boise River subbasin and sculpin only slightly less so. Sculpin distribution is naturally restricted from smaller and steeper streams where redband trout thrive. Bridgelip sucker, redside shiner, mountain whitefish, and hatchery rainbow/redband trout are likely common at most mainstem Little Smoky Creek and Big Smoky Creek sites, while longnose dace and northern pikeminnow are probably somewhat less common on the mainstem and a few tributaries. Non-native brook trout have been sampled in Five Points Creek, Salt Creek, Paradise Creek, and in lower Little Smoky Creek, while non-native kokanee salmon migrate from Anderson Ranch Reservoir into the upper South Fork Boise River, Big Smoky Creek, and Little Smoky Creek and possibly some tributaries during some years. Most of the named and unnamed perennial streams within the allotment which have not been sampled (including tributaries of named streams) likely also support native redband trout. A discussion of the presence of bull trout (listed as Threatened under the Endangered Species Act and a Sawtooth NF aquatic Management Indicator Species) in the Little Smoky Creek watershed follows.

Bull trout *(Salvelinus confluentus)*

Bull trout of the Columbia Basin Distinct Population Segment (DPS) were listed as threatened under the Endangered Species Act on June 10, 1998 by the USFWS. The designation of critical habitat for the Columbia Basin DPS on October 6, 2004 did not include any streams or lakes on the Sawtooth National Forest or in the South Fork Boise River (SFBR) subbasin. Bull trout are also the aquatic Management Indicator Species for the Sawtooth National Forest.

Resident, fluvial and adfluvial populations of bull trout were historically distributed throughout the Pacific Northwest in the United Sates and western Canada. Resident and fluvial populations occurred throughout the Snake River basin including the Boise River and its tributaries. Bull trout co-evolved with redband trout (*Oncorhynchus mykiss gairdneri*), westslope cutthroat trout (*O. clarki lewisi*), chinook salmon (*O. tshawytscha*), and/or mountain whitefish (*Prosopium williamsoni*). Recent surveys in the known range of bull trout in Idaho have shown metapopulations in widely scattered segments of river basins (Rieman and McIntyre 1993), as well as in isolated catchments.

In relationship to the proposed action, bull trout presently occur in the SFBR drainage on the Fairfield Ranger District. These fish spawn and rear young in many of the tributaries the SFBR (Kenney 2002), but the mainstem of the river and the lower reaches of most of the tributaries are not considered to be spawning or early (i.e., first year) rearing habitat. The mainstem of the SFBR and of Big Smoky Creek are thought to harbor adult and advanced juvenile fluvial (i.e., large-river dwelling) bull trout year-around and are known to serve as a migratory corridor for adult and advanced juvenile fluvial and adfluvial (lake-dwelling) bull trout during the spring and fall. In addition, some subadult fluvial and adfluvial bull trout (typically 175-300 mm in length) are known to "wander" into habitat which may not be suitable for spawning or early rearing (as opposed to migration to or from spawning and/or early rearing habitat) and may exist for short or long periods in streams reaches that otherwise would be unoccupied or used only as a migratory corridor (Personal communication, Bruce Rieman, retired Fisheries Research Biologist, RMRS). Full-time residents of the tributary streams where fluvial and adfluvial fish spawn and conduct early rearing are the third bull trout life history type known to occur in the SFBR drainage.

Relevant to the proposed action, bull trout appear to exist as reproducing populations in Emma, Vienna, Johnson, North Fork Big Smoky, and West Fork Big Smoky creeks, and possibly in a portion of the mainstem of Big Smoky creek. As noted above, bull trout also exist on the allotment complex as the migratory life-history in the mainstem of the South Fork Boise River and Big Smoky Creek and "wandering" subadult individuals may sometimes be found in almost any substantial stream.

Environmental Consequences (Effects)

Direct & Indirect and Cumulative Effects of the No Grazing Action (Alternative 1) to Aquatic Habitat and Associated Non-ESA Listed Organisms

Under Alternative 1, impacts associated with recent and current grazing management would cease, but impacts similar to those from grazing would continue as a result of other uses within the allotments. Although there would be improved riparian and water quality (fish habitat) conditions leading to overall improved habitat conditions for aquatic species, little or no change in fish

populations would likely occur within the project area. This is because all expected fish species are already present and relatively abundant on the allotments (with redband trout and sculpin very well distributed and abundant).

The degree of change from baseline riparian and instream habitat quality conditions that could be anticipated with the closure of the sheep grazing allotment complex would vary depending upon the type and severity of current impact. Sedges, grasses, and some other riparian plants tend to rebound quickly to non-grazed density and vigor. Grazing effects to willows and other riparian shrubs are more variable—growth of an existing shrub would more quickly respond to implementation of Alternative 1 than would density of a group of plants or potential recolonization of areas from which willows had been extirpated. Substantial effects on streambanks (e.g., amount of undercut) caused by current grazing practices and improvement on various aspects of channel morphology (e.g., channel narrowing and flushing of excessive fine sediment accumulations) depend more on the proximity and intensity of the future high streamflow events.

For the most part, substantial recovery to vegetation under the Alternative 1 should be noticeable within the first two growing seasons, while impacts to hydrology, soils and streambanks may require several to many years and/or high streamflow events to heal. Any water quality degradation associated with sheep waste products would cease with Alternative 1, but there is no evidence that this is currently a substantial problem. Depending upon the specific causes of any water temperature increases associated with current grazing (riparian vegetation vs. stream channel alterations) water temperatures may moderate within a few years or over many decades. Aquatic invertebrate diversity and abundance should respond quickly to relevant changes in habitat quality and quantity, as would fish species currently established in the allotment. Sheep undoubtedly cause some direct mortality to redband trout and other spring-spawning fish through trampling of immobile life stages, but there is no reason to believe that community health is affected by sheep-caused direct mortality and so implementation of Alternative 1 should not have any direct effect on fish population, size or distribution. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect and Cumulative Effects of the Proposed Action (Alternative 2) to Aquatic Habitat and Associated Non-ESA Listed Organisms

Continuing sheep grazing on the Anchustegui Allotment Complex as proposed would not change current habitat conditions for aquatic organisms. Temporary and widely distributed effects on riparian areas and stream channels would occur. Standards and guidelines from the Forest Plan would continue to be met or would continue improvement for these allotments.

Past and current livestock grazing, past mining, past timber harvest and road building, invasive weeds, fire suppression, recreation and firewood gathering, water diversions, and the development of cabins and residences on private land in-holdings and Forest lands have affected aquatic habitat and aquatic organisms on the Fairfield Ranger District. These effects were/are primarily caused by the alteration stream channel, riparian, and watershed characteristics. Fish harvest, fish stocking, and downstream dam construction have also affected directly affected the presence and abundance of fish and aquatic systems. Continuing sheep grazing on the Anchustegui Allotment complex as proposed would maintain cumulative effects on the Fairfield Ranger District to aquatic habitat and aquatic organisms at current levels. Discontinuing sheep

grazing on the Anchustegui allotments would not reduce cumulative effects to any measurable degree.

Direct & Indirect and Cumulative Effects of No Grazing Action (Alternative 1) to Bull Trout

While some impacts to bull trout habitat can be associated with the current and proposed grazing activity (see Fish and Aquatic Habitat discussion above), the effects of historic grazing, mining, etc. and of current non-grazing impacts likely overwhelm current grazing effects on bull trout habitat in nearly all locations within the allotment complex. The overall impact of implementation of Alternative 1 compared to the Proposed Action, except perhaps at specific sites, is therefore likely to be decidedly modest.

Bull trout exist within the northern portion of the Anchustegui allotment complex, including in stream reaches which provide spawning and early rearing habitat for this species: parts of Emma, Vienna, Johnson, North Fork Big Smoky, and West Fork Big Smoky creeks, and possibly in a portion of the mainstem of Big Smoky creek. These populations have apparently survived (or possibly re-established at some point) despite more than a century of livestock grazing, mostly at stocking levels higher than that proposed and without substantial monitoring. The streams in the allotment complex that do not support bull trout populations are either relatively small, at a relatively low elevation, or have relatively high road or trail-related disturbance in their drainages or riparian zones.

It does not seem likely that bull trout would establish or re-establish breeding populations in allotment complex streams currently not supporting such populations if Alternative 1 is adopted. This is because most, or all, of the potentially suitable spawning habitat for the species (e.g. in Salt, Skunk, and Paradise creeks) is on streams that are only marginally large enough to support a population or these streams are relatively highly impacted by human activities other than grazing. Under this Alternative, Forest Plan direction would be met.

Direct & Indirect and Cumulative Effects of the Proposed Action (Alternative 2) to Bull Trout

Direct effects to bull trout are unlikely to occur within a significant portion of the proposed action because bull trout are rare in much of the Anchustegui Allotment Complex, especially in those areas that would be used by the lamb band before shipping and those used by the dry band while trailing off the Forest. In these areas (the Little Smoky, Skunk Creek, Paradise-Calf, and southern Elk Creek Allotments and the portions of the dry band trailing route outside of the allotment complex) it is likely that no bull trout spawning or early rearing currently occurs (Kenney 2002, Kenney unpublished data); because no bull trout spawning is likely to occur, direct injury to immobile or marginally mobile individuals (through, for example, redd trampling) should also not occur. A few sub-adult bull trout may occur in the portions of the allotment complex that would be grazed before lamb shipping, but these fish (typically 150 or more millimeters in length) should be both alert and agile, and therefore should not be vulnerable to trampling by sheep during stream crossings or watering.

(A possible exception to the above description is grazing in the vicinity of Little Skeleton Creek, the upper reaches of which are within the Skunk Creek allotment. Bull trout spawning occurs in the Skeleton Creek drainage, but typically only above about 6400 feet msl. That portion of Little Skeleton Creek which is about 6400 msl and within the Skunk Creek allotment is a very small stream and unlikely to support bull trout spawning and rearing (Kenney, professional judgment).

Indirect effects to individual bull trout because of the pre-shipping activities of the Anchustegui lamb band, as discussed above, should also be unlikely, primarily because of the small number of bull trout likely to occur within this portion of the allotment complex and because of the small incremental effect of the proposed grazing on habitat factors such a water temperature, fine sediment transmission, etc. over the baseline condition. That is, in-stream and riparian conditions within the subject part of the allotment complex are sometimes "at risk" or "not properly functioning," but the degree to which conditions are unsuitable for bull trout are primarily to overwhelmingly unrelated to the proposed action. Effects on habitat indicators such as water temperature, fine sediment, and water quality have the potential to be transmitted downstream to Big Smoky Creek or the South Fork Boise River (where migratory and/or, likely, fluvial bull trout occur year-round), but the incremental effects of the proposed action over the baseline in these streams would be substantially attenuated by conditions within this stream to the point where it is doubtful that biologically significant effects would occur or be detected. Appendix 2 in the BA-BE for the Anchustegui Allotment Complex describes the potential effects of the proposed action on the various habitat indicators in the allotment.

The potential for bull trout to be affected by the activities of the Anchustegui dry band as it traverses the northern portion of the allotment complex (the Emma Creek drainage within the Elk Creek allotment, the Johnson Creek allotment, and the West Fork, North Fork, and possibly the upper few miles of the mainstem Big Smoky drainages within the Skillern allotment) is somewhat higher than for the lamb band as reproducing bull trout populations do exist in this area. Several mitigating factors apply, however. The substantially smaller number of sheep in the dry band (vs. the wet band), by itself reduces potential impacts, especially those based on effects on upland habitat. The terrain of much of the activity area makes direct interaction between the sheep and bull trout unlikely because a large majority of the mainstems of all of the bull trout streams would be essentially inaccessible to sheep because of steep canyon slopes or heavy timber. Small tributaries of these streams frequently cross the trailing routes and so the stock would not need or desire to access the bull trout-supporting channels to water. Indirect effects to bull trout habitat would potentially occur as described above for the lamb band.

The dry band would cross some of the bull trout-supporting streams in the allotment, however, and it is generally accepted that bull trout can begin to spawn in SFBR tributaries as early as mid-August; previous consultations have designated the date of concern as August 15. (Bull trout fry should have emerged from redds shortly after the hydrograph peak [Reiman and McIntyre 1993], typically early to mid-June, and so would relatively mobile and unlikely to be trampled, as would larger juvenile and adult individuals, after the lamb shipping in July). The primary concern is the potential for the sheep to disturb spawning bull trout or their redds when crossing potential spawning reaches or entering streams to water. In such streams, the potential for spawning or redd disturbance is high if normal stream crossing and watering protocols are followed. Even though bull trout spawning likely occurs along substantial reaches of these streams, local conditions within the reaches, such as fine sediment accumulating behind a physical feature, cobble or larger substrate, or localized high gradient would make bull trout

spawning at these sites unlikely. The U.S. Fish and Wildlife Service concurred with the Forest's "not likely to adversely affect" determination for the proposed action's effect on bull trout in a January 10, 2008 letter. Under this Alternative, Forest Plan direction would be met.

Because there likely would be no effect on individual bull trout, no cumulative effects would accrue to this species because of the proposed action. See also the discussion of cumulative effects on aquatic habitat.

CHAPTER FOUR

Consultation and Coordination

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

ID TEAM MEMBERS:

John Shelly	District Rangeland Management Specialist & Team Leader
Kevin Eldredge	District Rangeland Management Specialist
David Skinner	District Wildlife Biologist
Dan Kenney	Zone Fisheries Biologist
Kim Pierson	Forest Botanist
Terry Hardy	Forest Soils Scientist
Mark Dallon	Zone Hydrologist
Mark O'Brien	Zone Archaeologist
Bret Guisto	Forest Archaeologist
Ann Frost	District Recreation Staff
Warren Ririe	Forest Range Staff Officer
Carol Brown	Forest NEPA Coordinator
Cassandra Duchow	NEPA Writer/Editor

FEDERAL, STATE, AND LOCAL AGENCIES:

US Fish and Wildlife Service
Idaho Department of Fish & Game
Idaho Department of Agriculture
Idaho Department of Lands
Idaho Department of Parks & Recreation
Idaho Department of Environmental Quality
Idaho Department of Water Quality
Camas County Commissioners

TRIBES:

Shoshone-Bannock Nation

OTHERS:

Anchustegui Sheep Company – John Anchustegui (grazing permittee)
Western Watershed Project – Katie Fite (2007 & 2009 letters)

APPENDIX A – CITATIONS

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APPENDIX B – DRAFT ALLOTMENT MANAGEMENT PLAN